REPORT

OF THE

CENSUS OF THE PUNJAB AND DELHI, 1921.

CHAPTER I.

Distribution and Movement of the Population.

Section I—Descriptive.

1. The Punjab lies in the north-west of India and is a region of vast plains at the foot of the Himalaya mountains which run along its northern border ; the small province of Delhi forms an entrant into the southern portion of its eastern boundary and until recently formed a portion of the larger province. The Punjab lies roughly between the Jumna River on the east and the Indus River on the west and takes its name, which means the "Five Waters," from five rivers which traverse it from north-east to south-west and unite to pour their waters into the Indus towards the extreme south-west corner of the province. These seven rivers are the most important physical features of the country and have been determining factors in her history and in forming her external and internal administrative boundaries. The Sutlej enters in the north-east and runs in a west-south-westerly direction to join the Indus at Mithankot in the south-west and thus traverses the extreme length of the province ; this river and the Jumna are close together where they issue from the hills, but the latter then flows south and follows the whole eastern border of the province before turning east through the United Provinces to join the Ganges ; the watershed between them gradually widens until it merges into the plains of Rajputana with their own separate system of rivers. This watershed forms the south-eastern part of the province which adjoins the Rajputana States on the south-west, the boundary with these States being an arbitrary and irregular line not based on any particular physical feature. This south-eastern part of the province forms the Cis-Sutlej tract of early Anglo-Indian nomenclature and was the first part to be occupied by the British. The remainder of the province, the Trans-Sutlej region, forms a

Geographical position and boundaries of the Provinces.

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INTRODUCTION.

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1. Previous census reports of the Punjab have dealt in great detail with matters connected with religion, marriage customs, caste structure, languages and other subjects not necessarily directly connected with the statistics which it has been the object of the census to collect. **Preface.**

In view of the mass of information on these subjects which has been collected in census reports, gazetteers and reports of ethnographic and linguistic survey, it was considered unnecessary to deal with them again in great detail and in their place enquiry has been directed towards the economic and industrial conditions of the two provinces.

The census operations have taken place at a time when Deputy Commissioners and other local officers, already overburdened by the elaboration of their routine duties during the last decade, were concentrating all their energies in guiding the country through a critical period of change. At former censuses such local officers had responded nobly to calls upon them for the provision of masses of facts and information on subjects which were dealt with in the census reports: I have felt that it would be impossible for them to respond to any such call at this time, and have endeavoured to cast as little additional work as possible upon them in connection with the actual census and to refrain from calling upon them to send in reports on subjects of general interest. I find that I have issued only thirty-nine general circulars throughout the operations, and that of these only three asked for general information, the rest being entirely concerned with administrative details of the enumeration and preparation of statistics.

The inevitable result is that this report, following the lines of those prepared for European countries, will be confined in the main to an explanation of the figures which have been tabulated.

I have spared no endeavour to render these as accurate as possible, and where there are any reasons for suspecting inaccuracies I have no hesitation in pointing them out, so that as far as is possible the statistics may form a solid basis on which statisticians may base arguments and test theories. Not being a trained statistician myself I have tried to resist the fascinating temptation of building up theories from the statistics, though I have suggested lines of enquiry that might be taken up by those qualified for such work.

2. The dates of previous censuses are given in the margin, a short account of them will be found in paragraphs 20 to 22. Some of the Tables published in Part II of this report repeat figures for previous censuses back to that of 1881 : the two which had been taken before that dealt with such totally different administrative divisions that comparison with them is practically useless ; where figures for previous censuses have been reproduced in this report they have been adjusted so as to refer to existing divisions and not to the divisions which were in being at the time they were originally prepared ; they are thus already in a form suitable for comparison with the newly recorded statistics. **Previous Censuses.**

1st January 1855.
10th January 1868.
17th February 1881.
26th February 1891.
1st March 1901.
10th March 1911.

3. Changes in the boundaries of administrative units that have taken place since the census of 1911 are detailed in paragraphs 2 and 3 of this report, the only two important changes are the creation of the Delhi Province from portions of the old Delhi District of the Punjab and the Meerut District of the United Provinces, and the creation of the new district of Sheikhupura from portions of the surrounding districts of Lahore, Gujranwala and Lyallpur. **Changes in Boundaries and Areas.**

4. A full description of the census operations is published in the Administrative Volume, Part IV, of this report ; that volume being intended only for departmental and local use, a very brief note on each stage of the operations is given below. Very little change was made in the procedure gradually evolved and improved at previous censuses. **Operations of the Present Census.**

5. I took over charge of my duties on the 31st March 1920, and took the organisation in hand immediately. A preliminary circular together with the first three chapters of the Provincial Census Code was issued on the 27th April ; District Census Officers in every district and Census Superintendents in every **Initial Arrangements.**

State were appointed forthwith, and general village and town registers were prepared on which to base the formation of census divisions.

Census Division and Agency. 6. The whole countryside was parcelled out into blocks in which the enumeration could be carried out by one enumerator; these blocks were grouped in circles under supervisors, and the circles again grouped in charges under charge superintendents. The existing revenue divisions were very generally followed in fixing the boundaries of charges and circles, and the revenue agency was largely employed as Superintendents and Supervisors. These divisions were first fixed roughly and then revised after the completion of house-numbering showed where mistakes had been made in estimating the suitable boundaries for blocks; ultimately at the time of the final census there were 172,044 blocks, 13,943 circles and 1,017 charges, and the enumeration was carried out by 164,425 enumerators under the direction of 13,913 supervisors and 999 charge superintendents. Most of the supervising staff was recruited from amongst officials, whilst the enumerators were in the main voluntary non-official workers; all were appointed individually under the Census Act and thus all gained the status of public servants.

House-Numbering. 7. The Census Divisions having been tentatively fixed the next step was the numbering of all houses, this work was commenced on 15th September and completed within two months. Each house which might be occupied on the census night was clearly marked with a number, a separate series of numbers being kept for each circle. This work was carried out by the supervisors. As a result just over eight million houses were numbered, but to ensure that no person should escape enumeration many buildings were numbered which were not inhabited on the census night, and on that night it was found that only a little over five and a half million were inhabited. This numbering formed a reliable basis for the supply of forms, and after it was completed the census divisions were revised and fixed finally.

The Preliminary Enumeration. 8. In July a complete issue of the Census Code had been published and this was followed in August by a pamphlet of instructions for Charge Superintendents and Supervisors; short instructions for enumerators were printed on the covers of the actual enumeration books.

During the progress of house-numbering the whole staff received training in their duties; starting from the top each census officer instructed the officers immediately subordinate to him so that the instructions drifted down from the Provincial Superintendent to the enumerators. Test enumerations formed the main part of the training.

The preliminary enumeration took place between the 1st February till the 1st March in rural tracts, in towns it was both commenced and finished a fortnight later. At this enumeration all persons likely to be in residence on the 18th March were entered up in the enumeration books; this procedure allowed ample time for the careful recording and checking of all entries and reduced the work at the final census to a minimum. The enumeration book consisted of a cover, containing instructions and forms of summaries to be filled up and detached after the census; a block list, which was a detailed list of the houses in the block and served to prevent any buildings being overlooked either at the preliminary or final enumeration; and a sufficient number of general schedules on which the actual particulars concerning each person were recorded.

The Final Census. 9. The final census took place between 7 and 12 o'clock on the night of the 18th March, every enumerator visited all the houses in his block and corrected his enumeration book by striking out entries referring to people who were found to have left since the preliminary record had been prepared and by adding entries for all new-comers. This having been completed every entry in the book was given a serial number—the number of occupied houses, persons, males and females was totalled for the block, then for the circle and then for the charge. The charge summaries were totalled for the district or town at district headquarters and then telegraphed to Lahore and Simla.

Use of Household Schedules. 10. The general schedule was a tabular statement of lines and columns with a line for each person enumerated and a column for the record of each particular regarding him. In a few places, where Europeans were numerous and it was possible to obtain the services of an English-speaking enumerator, these forms were used in English for the recording of Europeans; but in general Europeans are found in small numbers in blocks containing many Indians and in such cases the enumerator could not be expected to fill up entries concerning them in a

general schedule; to meet this difficulty Europeans were supplied a few days before the census with an English form termed a "household schedule" on which to fill in for themselves the entries regarding themselves and other members of their households. In spite of very detailed instructions for filling them up, these household schedules were often carelessly completed and their collection and correction was accompanied by much difficulty.

Non-Synchronous Census in Inaccessible Tracts.

11. A few outlying portions of the Province are cut off by snow-covered passes which render them completely inaccessible in March; in these a census was held in the autumn of 1920 and the results of it treated as part of the March Census. The dates of such non-synchronous censuses are given in the margin. In addition to these there were other tracts where the preliminary enumeration had to be held in the autumn of 1920, though it was found possible to hold the final census at the normal time. In yet other tracts the presence of wild beasts rendered night-work unsafe, and the final census was held at daybreak on the 19th March instead of the previous night.

Kangra District—	
Kothis Kodh and Sowar ..	20-9-20
Lahul and Spiti	29-8-20
Chamba State—	
Pangi and Lahul	15-9-20
Bashahr State—	
Chini and Dodra Kuar ..	15-12-20

Arrangements for Railways, Fairs and Migratory Population.

12. Special arrangements were made to enumerate the persons travelling on the census night and as each was enumerated he was provided with a pass which prevented his being enumerated a second time; the work of this sort of the greatest magnitude was the census on the railways. All railway stations were made into separate blocks or circles in the district in which situated, a special enumerating staff was posted to each at 7 p.m. on the night of the 18th March and remained on duty till 6 a.m. next morning or until the last train had passed through and the station was closed for the night; this staff enumerated everyone found on the station at 7 p.m. and thereafter enumerated everyone arriving at the station either by road or rail who could not produce a pass showing that he had already been enumerated. In this way everyone entering or leaving a train during the night was accounted for; there remained a few people on trains running long distances who had entrained before the station enumeration started and had not left the train next morning; to ensure that these people were also counted it was arranged that all trains running throughout the night should carry an enumeration staff; this staff spent the night enumerating the passengers and at 6 a.m. all such trains were stopped and a final enumeration carried out of all those who had not got passes.

The District census authorities were responsible for the station enumeration which was however usually carried out through the agency of the station staff; the running train enumeration was conducted entirely by the railway authorities themselves.

The instructions issued provided for all contingencies, and it is unlikely that more than a very few railway travellers escaped enumeration; the above description only indicates the broad lines on which arrangements were made. Enumerating staffs were appointed to 762 stations in the two provinces and 69 running trains.

Especial arrangements for fairs and other large concourses of people were put in train beforehand and were necessitated in thirty places.

All main roads were patrolled by enumerators, staffs were posted to ferries, especial arrangements for troops on the march were made with officers in charge of such units. There remained such persons as were temporarily absent from their houses, guarding their fields or doing other casual work in the immediate vicinity; the orders contemplated that these should be recorded as though present in their houses, and it is probable that very few escaped enumeration.

Provisional Totals.

13. As explained in paragraph 9, the totals for each district, State and town were added up as soon as possible after the census; these totals included all persons whether enumerated at their houses or whilst travelling; their collection from outlying tracts was one of considerable difficulty and motor-cars, horse-men, camel-riders, and runners were employed in bringing them in.

The Kapurthala, Pataudi and Nabha States were all able to telegraph their provisional totals on the 19th March; in British Territory the Delhi Province was the first unit to report its totals which it did on the 20th; the great majority of totals had been got in by the evening of the 22nd March but the last district, in which work had been delayed owing to a mistake in a cantonment, was not able to wire its total till the 27th. The figures as reported by telegram

are compared with those finally tabulated below, and show a high standard of accuracy for so hurried an operation.

	Occupied houses.	Persons.	Males.	Females.
PUNJAB.				
Provisional Total	5,523,073	25,093,794	13,726,146	11,367,648
Final Totals	5,532,305	25,101,060	13,732,048	11,369,012
DELHI.				
Provisional Totals	112,836	486,741	280,709	206,032
Final Totals	114,683	488,188	281,633	206,555

Slip copying.

14. The next stage in the operations was to copy the entries concerning each person enumerated on to a separate slip. These slips were issued in five different colours, one for each of the main religions and one for all other religions; a distinctive symbol was printed on each to distinguish between males and females, and between unmarried, married and widowed persons; there were thus five different colours and six different symbols giving a total of thirty easily dis tinguished slips; in addition special slips were issued for the recording of infirmities; the other particulars recorded about each person were recorded by hand on the slips, a previously arranged system of abbreviations being adopted.

This work was done as in 1911 by the supervisors who were collected at tahsil headquarters for the work immediately after the census; as the period available was very short owing to the majority of supervisors being patwaris who were required in their circles for crop-inspection, an option was given to local authorities to have slips prepared from the preliminary record before the final census. The intention of this option was that slips should be prepared according to the provisional entries in the enumeration books so that the only copying work to be done after the census would be to destroy slips for cancelled entries and prepare new ones for the entries made on the actual census night. 21 districts and 10 states adopted the option and prepared slips beforehand, in only a few of these was the experiment justifiedby the result; slip-copying after the census was carried on by a staff collected together and constantly under supervision. that done before the census was done by supervisors in their circles and was only the subject of supervision by charge superintendents when they visited the circles; it was very generally found that the slips prepared before the census had to be corrected or prepared afresh after the census and the experiment did not result in the saving of time and led to a considerable additional wastage of slips. Although very careful estimates of the numbers of slips required in each tahsil had been made beforehand and a supply sent allowing a liberal excess for wastage, yet in many centres slips of particular varieties ran short and a break-down in printing arrangements occurring at the critical time much delay resulted; in many districts it was found impossible to complete the copying before letting the patwaris return to their urgent revenue duties and in such districts the copying had to be finished after the crop-inspection was over. It was hoped to complete the slip-copying by the 27th March and this could have been done in most centres had not the supply of slips broken down; actually the slips came in very slowly and a considerable number of units had not sent in slips by the middle of May whilst the last to be received arrived at the beginning of July.

Sorting.

15. Central sorting offices were opened at Karnal, Ludhiana, Lahore and Lyallpur; and the completed slips were sent to these offices where large staffs sorted them according to the various heads required for each table of the report.

The maximum staff employed and the dates of commencing and completing the work in each of these offices is shown in the margin. The Phulkian States, Patiala, Jind and Nabha, carried out their own sorting and tabulation, but with this exception all the sorting was carried out at the four central sorting offices.

Office.	Staff.			Commencement.	Completion.
	Inspectors.	Supervisors.	Sorters.		
Karnal ..	3	18	186	7th April 1921.	21st August 1921.
Ludhiana ..	4	23	224	1st April 1921.	22nd August 1921.
Lahore ..	5	22	260	1st April 1921.	18th July 1921.
Lyallpur ..	4	22	211	6th April 1921.	17th July 1921.

16. The results of the sorting were set forth on sorters' tickets which were sent to the compilation office in Lahore where they were compiled into District or other units totals, and then finally arranged in the form in which they appear in the Tables Volume of this report. This office was in charge of my Personal Assistant who had a large staff of Inspectors and Compilers working under him. The office opened on 1st May 1921, the first table was sent to the press on 17th September 1921 and the last table was finally printed off on 17th January 1923. The process of tabulation is a long and complicated one, any errors in the previous operations, which have escaped detection, come to light at this stage when their correction involves long and careful investigation which is extremely difficult to carry out. Compilation.

17. The results of the census are published in four parts, the months in which these were issued or in which it is expected that they will issue are as follows:— Publication.

Part I.	The Report	during June	1923.
Part II.	The Imperial Tables	,, May	1923.
Part III.	Appendices to the Imperial Tables ..	,, May	1923.
Part IV.	The Administrative Volume	,, June	1923.

18. The census of the two provinces has cost Government Rs. 3,59,224 which works out at Rs. 14-0-8 for every 1,000 persons enumerated: this compares with Rs. 1,23,907 or Rs. 5-1-11 per 1,000 in 1911. In addition to this sum of Rs. 3,59,224, the total cost of the census includes Rs. 23,112-1-3 recovered from Municipalities on account of cost of tabulation, Rs. 11,550-7-7 recovered from Indian States on account of the cost of forms, sorting and compilation; whilst Indian States have reported a cost of Rs. 50,977-12-10 for the enumeration that they themselves carried out. The Phulkian States have been omitted altogether in reckoning these figures as they carried out the whole of the operations themselves. Cost of the Census.

19. First and foremost a very grateful acknowledgment is due to the official and non-official census staff that carried out the enumeration and slip-copying. With few exceptions this enormous body of workers gave its services freely and without expectation of payment of reward; the non-officials were honorary volunteer workers, whilst the officials undertook the heavy extra duties without additional payment. All are deserving of the sincerest thanks and of congratulations on the public spirit they exhibited, especial praise is due to the patwari staff. Patwaris are hard-worked officials and many miscellaneous duties beyond those directly connected with the revenue administration fall to their lot; they undertook the severe strain of census duty with very little grumbling and carried it through as efficiently as they were able to do; in addition to forming the backbone of the enumeration staff they carried through the slip-copying, which is a monotonous and uninteresting work which has to be carried through at high pressure. Some small acknowledgment of the services of the enumerating staff has been made by the presentation of *sanads* (certificates) for good work, these were issued in three classes, and the numbers issued were 1st Class 242, 2nd Class 1,218 and 3rd Class 7,641; in addition at the close of the financial year 1921-22 I devoted all funds available for the purpose towards giving rewards for slip-copying, but I only had Rs. 16,000 available and only Rs. 15,047 were actually distributed, which only allowed small rewards being given to the best of the men. Acknowledgments.

Deputy Commissioners and District Census Officers, throughout the provinces, directed the operations in their respective districts; their work has increased during the last decade and it could not be expected that they would find much time available for personal superintendence, but so far as their time permitted they all contributed to the success of the operations; amongst Deputy Commissioners I would especially wish to mention Mr. Harcourt in Gurdaspur and Mr. Gordon Walker in Rohtak who took much personal interest in the work in their districts. The work of Mr. Lane Roberts, who was in charge in the Delhi Municipality, and of Mr. Blacker, who conducted operations in the trans-frontier tract of Dera Ghazi Khan, deserves particular notice; both these officers had exceptional difficulties which they surmounted with enthusiasm.

The darbars of the Punjab States appointed Census Superintendents to take charge of census operations, in many cases these officers were able to devote their whole time to the census, and all had more time to give to it than the busy

officials who had to undertake the work in British districts without any diminution in their other duties. Amongst a group of very capable and helpful officials I would single out Sardar Bachittar Singh in Patiala, Syed Abdul Majid in Kapurthala and Syed Altaf Hussain in Jind, but with one exception the work of all was so good that I feel considerable diffidence in specially mentioning any by name.

Five Extra Assistant Commissioners worked under me in the Census Department; Lala Arjan Das worked as my Personal Assistant between 21st January 1921 and 31st August 1921 and was succeeded by Sheikh Abdul Majid who had already been in charge of the Lahore Sorting Office. The Personal Assistant was in general charge of the tabulation work; and both incumbents of the office worked well, Lala Arjan Das giving me material assistance in the preliminary stages and Sheikh Abdul Majid preparing and checking the tables; the whole work was new to Sheikh Abdul Majid, but he organised both the sorting and tabulating work on sound lines and justified his selection. The other three sorting offices were also under men new to the work; they were Syed Abdul Haq at Ludhiana, Lala Bishamber Dayal Singh at Karnal, and Malik Chiragh-ud-din at Lyallpur; the newness of the work led to several mistakes being made which caused much trouble to rectify but on the whole the work was satisfactory. that of S. Abdul Haq being rather more dependable than that of the others.

Change of Superintendent.

20. Owing to ill-health I was obliged to take leave from the 21st September 1922; previous to that date ill-health had delayed my work, and on relinquishing my charge I had only written so much of the Introduction to the Report which precedes this paragraph and Chapter I, but Parts II and III of the Report had been completed and were with the Press. I relinquish charge without information as to the identity of my successor who will write the major portion of the Report and complete this introduction.

L. MIDDLETON.

20-9-22.

INTRODUCTORY NOTE CONTINUED.

21. I took over as Superintendent, Census Operations, on the 3rd October 1922, Sheikh Abdul Majid, B.A., LL. B., having remained in charge of the Office after Mr. Middleton's departure. As he has noted Mr. Middleton had completed Chapter I of the Report, and this chapter alone contains a comprehensive survey of nearly all the subjects dealt with in the census. Mr. Middleton also took to England and completed there the whole of the Administrative Volume. Part IV.

22. My own task has been to see a great portion of Parts II, III and IV through the press and to write the eleven remaining chapters of Part I. Two months were spent in gaining familiarity with all the phases of census work, and in the remaining five months the chapters have been written rather faster than at the rate of one a fortnight, so as to complete the report by the end of April. Under these circumstances I have had strictly to limit the time devoted to the investigation of those fundamental principles without which it is impossible to understand the problems of migration, birth and death-rates, and age-distribution.

23. Throughout the chapters for which I am responsible I have sought, wherever possible, to express results in a precise statistical form with due regard to the probable errors of enumeration. Neglect of this consideration has led to the formulation of many utterly unproven and even demonstrably false propositions. Every census report in fact bristles with dogmatic statements and I should hesitate to estimate how many are contained in the chapters written by myself. I am fully aware that that to make much unqualified statements is contrary to the spirit of scientific progress, and would ask the reader to believe that the limitations to which most of the statements are subject were in many cases present to my mind even when they are not explicitly set forth.

Nothing, in fact, is more conducive to dogmatic statement than the masses of statistics contained in a census report, yet no where is dogmatic statement less justified or the critical spirit of present-day statistical doctrine more necessary. Indeed modern statistical methods probably indicate more often what conclusions are false than what conclusions are true and even this seemingly negative result may be reached only after patient and abstruse enquiries.

24. In addition to the gentlemen whose services have been acknowledged by Mr. Middleton, I wish to express my thanks to those who have specially assisted me, in particular, to Colonel W. H. C. Forster, I.M.S., Director of Public Health, Punjab, whose constant advice and criticism has been of the utmost value in all matters relating to vital statistics and deaths from disease; to Mr. G. Anderson, C.I.E., I.E.S., Director of Public Instruction, who kindly devoted many hours together with several departmental officers to the discussion of the problem of education and its bearing on the general literacy of the province; to Colonel Ward, I.M.S., Inspector-General of Prisons, who furnished me with some special jail mortality statistics; to Mr. Calvert, I.C.S., Registrar, Co-operative Credit Societies, whose unrivalled knowledge of the industrial and rural economics of the Punjab has been freely placed at my disposal in the form of notes on my draft chapter on occupation; to Mr. R. Sanderson, M. A., I. E. S., Inspector of Schools, Lahore Division, who has kindly supplied me with certain data regarding Albinos; to Mr. H. L. O. Garrett, M.A., I.E.S., for a note on recruitment in the Ludhiana district; to Rai Bahadur Sir Ganga Ram, Kt., C.I.E., C.V.O., for information regarding the Vidhva Vivah Sahaik Sabha, Lahore; to Mr. Faqir Chand, Auditor of Statistics, North-Western Railway, for information supplied regarding the number of passengers and density of traffic on the North-Western Railway; to Mr. Labha Mall, Assistant Librarian of the Punjab University Library, for bringing to my notice several interesting books on population statistics; to the authorities of the "Civil and Military Gazette" Press, and in particular, to Mr. Gilbert, whose unfailing courtesy and energy has smoothed the task of getting so much material into print; to Mr. K. C. Vidyarthi, Manager of the Bharat Insurance Company, for his kind treatment of the Census Department which rented offices in the Bharat Buildings. Finally, I must acknowledge the great services rendered by my Personal Assistant, Sheikh Abdul Majid, B.A., LL.B., but for whom the task of completing the report within the short time allotted would have been well-nigh impossible. The Chapters IV and IX on religion and language are almost entirely his own, and I did little more than edit them. Both my computers, Mr. Abdul Majid, M.A., and Mr. Balwant Singh, B.Sc., gave great assistance in many laborious computations and both of them put up many valuable notes. Good work was done by all members of the staff of whom Mr. Barkat Ali, Head Clerk; Sheikh Mohammad Abdul Wahid, Recordkeeper; Inspectors Ata-ur-Rahman and Fazal Din, and my Stenographer Bawa Jagat Singh may be specially mentioned.

S. M. JACOB.

1-5-23.

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vast triangle bounded by the Himalayas, the Sutlej and the Indus; this triangle is divided into five smaller triangles by the other four rivers, each triangle being known as a "Doab" or land of two waters; the present districts of the province are in general sub-divisions of these doabs and rarely lie on both sides of a river. The Dera Ghazi Khan District on the right bank of the Indus and the Bahawalpur State on the left bank of the Sutlej, which do not fall into the description given above, form outlying portions of the Punjab which are in many ways distinct from it.

In the north-east the Punjab runs with Tibet for a short distance, on the east it adjoins the United Provinces, to the south lie the States of Bikanir and Jaisalmir and the Sind tract of the Bombay Presidency; Baluchistan and the North-West Frontier Province lie across its western boundary, whilst Kashmir State lies to the north.

External changes in boundaries since 1911.

2. Apart from a few unimportant transfers due to riverain action between the United Provinces and the Karnal and Gurgaon Districts of the Punjab there has been only one change since the last census, but that a most important one, in the boundaries of the Province. At that time the Delhi District was part of the Punjab, but in 1911 it was decided to move the Imperial Capital to Delhi and the district was remodelled and placed under a separate local government as a separate province in the following year. The present province of Delhi bears little relation to the old Punjab district of that name; that district consisted of three tahsils—Delhi, Sonepat and Ballabgarh; at the time of separation the tahsil of Sonepat with an area of 448 square miles was transferred bodily to the Rohtak District, whilst an area of 280 square miles from Ballabgarh Tahsil was transferred to the Gurgaon District. The major portion of the old district therefore remained in the Punjab and only the Delhi Tahsil and a small portion of the Ballabgarh tahsil went to the new province; later on the Delhi Province was enlarged by the addition of some 46 square miles from the Meerut district of the United Provinces, and was thus brought to its present size of 593 square miles.

This being so care must be taken never to compare any statistics compiled for the Delhi Province with those of the old Delhi District; in the Imperial Tables wherever previous census figures are given for Delhi they have been carefully corrected so as to refer to the area which now forms the province and therefore form a basis for comparison. It was not found possible to make similar adjustments in the majority of figures in the Subsidiary Tables and miscellaneous statements given in this report; in these, where comparison with previous figures is required, they must be made between them and the combined figures for the Punjab and Delhi in 1921. In order to provide a basis for comparison in future the 1921 figures have been shown both in the combined form and separately for each province.

Internal changes.

3. Numerous trifling adjustments of boundaries of internal divisions have taken place since 1911; a complete list of these is given at the end of this paragraph and it will be seen that twenty-four affect district boundaries and that twenty-five more affect the boundaries of tahsils but not of districts. Necessary adjustments in figures for area and population at past censuses have been made wherever these appear in this report, so that the figures now published refer to the internal divisions as existing after all these transfers had been effected. At the time of the census the Sheikhupura District was in the course of formation, it was created in 1919 from parts of the Lahore and Gujranwala Districts, some subsidiary transfers from Sialkot to Gujranwala taking place at the same time. It was intended to add to it on the 1st April 1921 by the addition of 159 villages from Jaranwala and this date being so close to the census I was directed to treat it as though it had already been effected. The proposed transfer was much delayed and on the 1st April 1922 a general reconstitution of the new district took place; the major portion of the Raya Tahsil of Sialkot was added to Sharakpur, the remainder being merged in the Zafarwal Tahsil; the previously proposed transfer took place at the same time and the enlarged Sharakpur Tahsil was split into two new tahsils of Nankana Sahib and Shahdara. By this time it was too late to amend the census statistics, either by including all the changes which occurred on 1st April 1922 or by omitting that which had been prematurely recognised, the result is that the figures in this report do not deal with the Lyallpur and Sheikhupura Districts exactly as they stood at the time of the census.

The transfers connected with the formation of the Sheikhupura District were the most important which occurred in the decade; others affecting considerable areas were those from the Bhera Tahsil of Shahpur to the Phalia Tahsil of Gujrat in 1911, and from the Okara Tahsil of Montgomery to the Samundri Tahsil of Lyallpur in 1912.

Of the twenty-five changes which occurred between tahsils within the same district, and thus did not affect district boundaries, the most important are those in connection with the creation of two new tahsils,—Jaranwala in the Lyallpur District and Khanewal in the Multan District; whilst a third of some magnitude was the transfer of thirty-seven villages from the Moga to the Ferozepore Tahsil in the Ferozepore District.

The Bhera Tahsil of Shahpur District and the Gugera Tahsil of the Montgomery District have gone through a process of remodelling during the decade and have had their names changed to Bhalwal and Okara respectively.

Some of the Punjab States have altered the boundaries of their internal administrative divisions. In Patiala State the four tahsils of Payal, Ghanaur, Banur and Mohindargarh have been absorbed in the tahsils of Sirhind and Dhuri, Patiala, Rajpura and Narnaul respectively, whilst the old tahsils of Pinjaur and Bhiki have been named Kandaghat and Mansa. In Nabha State the old tahsil of Phul has been split up into three new tahsils, Phul, Jaitu and Dhanaula, whilst part of the old tahsil of Amloh has been constituted a separate tahsil under the name of Nabha.

All the changes to which reference has been made in this and the preceding paragraph are noted in the following statement :—

	From which transferred		To which transferred				
	District.	Tahsil.	District	Tahsil.	Area in square miles.	Number of Notification.	Date.
	A.—Affecting Provincial Boundaries.						
1.	Delhi	Sonepat	Rohtak	Sonepat	448	2922-S.	1-10-12
2.	Delhi	Ballabgarh	Gurgaon	Ballabgarh	280	2944-S.	1-10-12
3.	Meerut, U. P.	Ghaziabad	Delhi	Delhi	46	984-C.	22-1-15
4.	Delhi	Ballabgarh	Delhi	Delhi	101	984-C.	22-1-15
5.	Dhankor, U. P.	..	Gurgaon	Ballabgarh	7	River action.	
6.	Muzaffarnagar and Saharanpur, U. P.	..	Karnal	Karnal	28	River action.	
7.	Muzaffarnagar, U. P.	..	Karnal	Panipat	2	River action.	
8.	Karnal	Karnal	Muzaffarnagar and Saharanpur, U. P.		8	River action.	
9.	Karnal	Panipat	Muzaffarnagar and Saharanpur, U. P.		2	River action.	
	B.—Affecting District Boundaries.						
10.	Lahore	Chunian	Sheikhupura	Sharakpur	58	23035	30-10-19
11.	Lahore	Lahore	Sheikhupura	Sharakpur	84	23035	30-10-19
12.	Gujranwala	Khangah Dogran.	Sheikhupura	Khangah Dogran.	880	23036	30-10-19
13.	Gujranwala	Sharakpur	Sheikhupura	Sharakpur	891	23037	30-10-19
14.	Lyallpur	Jaranwala	Sheikhupura	Sharakpur	104	10427	27-3-22
15.	Sialkot	Pasrur	Gujranwala	Gujranwala	105	23035	30-10-19
16.	Sialkot	Daska	Gujranwala	Gujranwala	74	23035	30-10-19
17.	Simla	Simla	Ambala	Kharar	3	148-Police	29-3-16
18.	Sialkot	Raya	Amritsar	Ajnala	2	504	30-7-15
19.	Amritsar	Ajnala	Sialkot	Raya	1	505	30-7-15
20.	Shahpur	Bhera	Gujrat	Phalia	306	224	27-3-11
21.	Shahpur	Bhera	Gujrat	Phalia	6	197	10-2-14
22.	Shahpur	Bhera	Gujrat	Phalia	2	3419	13-2-18
23.	Montgomery	Gugera	Lahore	Chunian	6	660	15-7-12
24.	Montgomery	Gugera	Lahore	Chunian	3	224	11-3-13
25.	Montgomery	Montgomery	Lyallpur	Samundri	3	223	11-3-13
26.	Montgomery	Okara	Lyallpur	Lyallpur	177	222	11-3-13
27.	Montgomery	Okara	Lyallpur	Samundri	4	123	13-1-12
28.	Lyallpur	Samundri	Montgomery	Montgomery	3	450	24-7-11
29.	Lyallpur	Toba Tek Singh.	Montgomery	Montgomery	1	208	26-3-15
30.	Multan.	Mailsi	Montgomery	Montgomery	95	453½	30-6-15
31.	Multan	Kabirwala	Montgomery	Montgomery	33	453½	30-6-15
32.	Lyallpur	Toba Tek Singh.	Jhang	Shorkot	89	578	3-9-13
33.	Lyallpur	Toba Tek Singh.	Jhang	Shorkot	0	10844	8-4-17

	From which transferred. District.	From which transferred. Tahsil.	To which transferred. District.	To which transferred. Tahsil.	Area in square miles.	Number of Notification.	Date.
			C.—AFFECTING TAHSIL BOUNDARIES ONLY.				
34.	Ferozepore	Moga	Ferozepore	Ferozepore	182	..	..
35.	Ferozepore	Ferozepore	Ferozepore	Zira	1	..	..
36.	Shahpur	Shahpur	Shahpur	Bhalwal	3	681	22-7-12
37.	Shahpur	Shahpur	Shahpur	Khushab	1	707	30-7-12
38.	Shahpur	Bhalwal	Shahpur	Sargodha	15	S-124	16-2-11
39.	Shahpur	Bhalwal	Shahpur	Sargodha	4	532	27-5-12
40.	Shahpur	Bhalwal	Shahpur	Sargodha	4	4423	26-2-18
41.	Montgomery	Montgomery	Montgomery	Okara	35	453	30-6-15
42.	Lyallpur	Samundri	Lyallpur	Lyallpur	47	576	3-9-13
43	Lyallpur	Samundri	Lyallpur	Jaranwala	161	577	3-9-13
44.	Lyallpur	Lyallpur	Lyallpur	Jaranwala	525	577	3-9-13
45.	Lyallpur	Samundri	Lyallpur	Toba Tek Singh.	40	576	3-9-13
46.	Multan	Multan	Multan	Khanewal	243	6966	25-3-18
47.	Multan	Lodhran	Multan	Khanewal	2	6966	25-3-18
48.	Multan	Mailsi	Multan	Khanewal	138	6966	25-3-18
49.	Multan	Kabirwala	Multan	Khanewal	509	6966	25-3-18
50.	D. G. Khan	Jampur	D. G. Khan	D. G. Khan	2	26880	1-12-19
51.	Patiala	Banur	Patiala	Rajpura	162	Ijlas Khas Order	25 Chet 1975
52.	Patiala	Ghanaur	Patiala	Patiala	185	„ „	„
53.	Patiala	Mohindargarh	Patiala	Narnaul	299	„ „	„
54.	Patiala	Payal	Patiala	Sirhind	123	„ „	„
55.	Patiala	Payal	Patiala	Dhuri	152	„ „	„
56.	Nabha	Phul	Nabha	Jaitu	64	..	..
57.	Nabha	Phul	Nabha	Dhanaula	180	..	..
58.	Nabha	Amloh	Nabha	Nabha	123	..	..

Administrative Divisions

4. At the time the last Census Report was written the Punjab was divided into twenty-nine districts, each administered by a Deputy Commissioner, and these were grouped in five divisions, each in charge of a Commissioner. The separation of Delhi and the creation of the Sheikhupura District leave the number of districts unaltered ; the composition of divisions is however slightly altered as the old Delhi Division, now known as the Ambala Division, has lost one district ; whilst the Lahore Division, though scarcely altered in area, now includes six instead of five districts. These administrative divisions of the British Territory in the Punjab are shown below in the order in which they appear in the tables of this report and in all official documents :—

Ambala Division.	*Jullundur Division.*	*Lahore Division.*	*Rawalpindi Division.*	*Multan Division.*
1. Hissar.	7. Kangra.	12. Lahore.	18. Gujrat.	24. Montgomery.
2. Rohtak.	8. Hoshiarpur	13. Amritsar.	19. Shahpur.	25. Lyallpur.
3. Gurgaon.	9. Jullundur.	14. Gurdaspur.	20. Jhelum.	26. Jhang.
4. Karnal.	10. Ludhiana.	15. Sialkot.	21. Rawalpindi.	27. Multan.
5. Ambala.	11. Ferozepore.	16. Gujranwala.	22. Attock.	28. Muzaffargarh.
6. Simla.		17. Sheikhupura.	23 Mianwali.	29. D. G. Khan.

The Indian States which are dealt with in this report were at the time of the census all in direct political relationship with the Punjab Government, but since then thirteen of them have been placed in direct connection with the Government of India and an Agent to the Governor-General has been appointed who is not responsible to the Punjab Government. In the tables of the 1911 Census Report the forty-three States concerned were arranged in geographical order with reference to their proximity to administrative divisions; of these twenty-eight were grouped together as the Simla Hill States. Owing to the change in political relationship these States have been re-arranged in the tables of the present report as follows :—

A.—Having Political Relations with the Punjab Government.	*B. Having Political Relations with the Government of India.*	
1. Dujana.	5. Loharu.	12. Faridkot.
2. Pataudi.	6. Nahan.	13. Chamba.
3. Kalsia.	7. Bilaspur.	14. Patiala.
4. Simla Hill States. (27 States).	8. Mandi.	15. Jind.
	9. Suket.	16. Nabha.
	10. Kapurthala.	17. Bahawalpur.
	11. Malerkotla.	

It should be noted that the arrangement depends firstly on the closeness of their relations with the province, and secondly, on the geographical position they occupy ; considerations of seniority, size or importance have not entered into the arrangement.

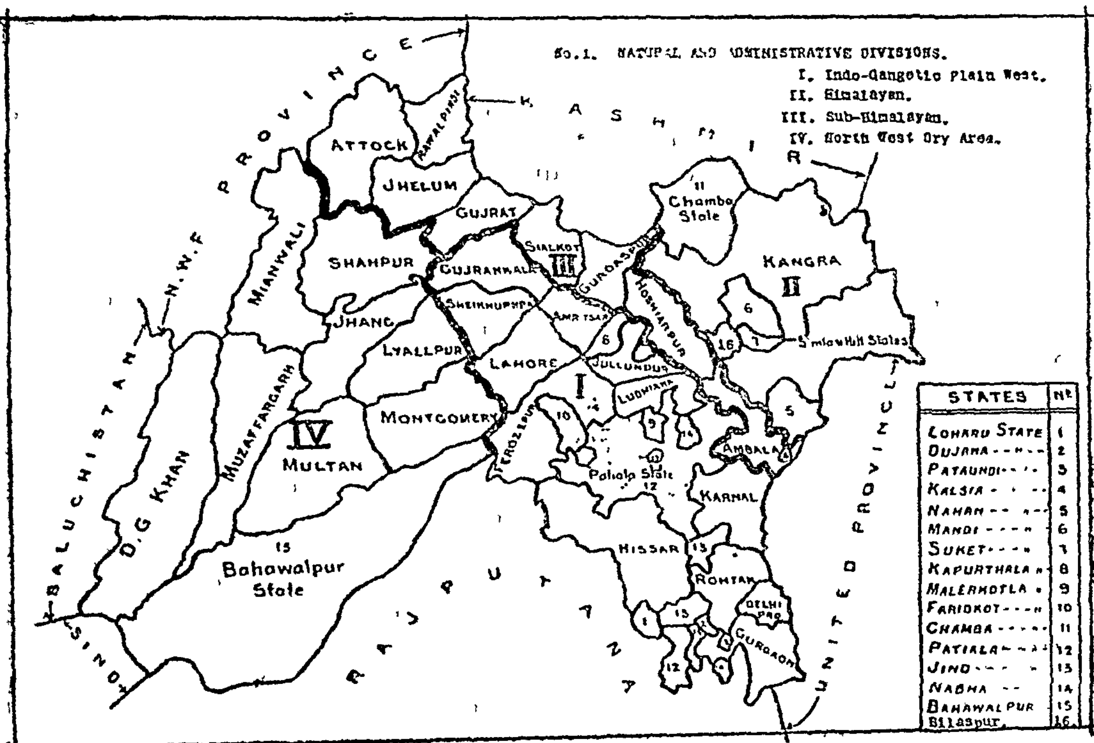
Total figures for all forty-three States have been shown for comparison with previous Census Reports, and separate totals have been shown for the two groups of States to permit of comparison should a separate report be prepared for States in the Punjab Agency at future censuses.

To avoid a very possible source of error in making comparative researches it must be remembered that the term "Simla Hill States" in all Census Reports previous to this has included twenty-eight States whilst it now only includes twenty-seven; this change is due to the fact that Bilaspur State, which previously looked to the Superintendent of the Simla Hill States as its Political Officer, now deals with the Agent to the Governor-General and can no longer be included in the term.

The Delhi Province, consisting of one district of a single tahsil, has no administrative divisions.

Natural Divisions.

5. For many comparative statistical purposes the division of the country by administrative divisions is unsuitable, and India has been divided up into natural divisions distinguished mainly by their physical features, climate and rainfall. Four of these cover the Punjab and are known as the Indo-Gangetic Plain West, the Himalayan, the Sub-Himalayan and the North-West Dry Area. The whole of the Delhi Province lies in the first of these. It will be noted that the names given to these divisions were chosen with reference to India as a whole, and that the North-West Dry Area does not lie in the north-west of the Punjab.



The Districts and States which lie in each of these natural divisions are noted in the margin; no change beyond the separation of Delhi has been made since the last census and statistics for the natural divisions are comparable with those recorded then without adjustment.

The second and third of these divisions are very well marked, but it is difficult to fix a satisfactory boundary between the first and fourth which gradually merge into each other.

In the north-west the Punjab extends beyond the outer range of the Himalayas and the Himalayan Division includes country on both sides of this range; cultivation is limited to the lower slopes,

I.—Indo-Gangetic Plain West.

1. Hissar.
2. Loharu State.
3. Rohtak.
4. Dujana State.
5. Gurgaon.
6. Pataudi State.
7. Karnal.
8. Jullundur.
9. Kapurthala State.
10. Ludhiana
11. Malerkotla State.
12. Ferozepore.
13. Faridkot State.
14. Patiala State.
15. Jind State.
16. Nabha State.
17. Lahore.
18. Amritsar.
19. Gujranwala.
20. Sheikhupura.

II.—Himalayan.

21. Nahan State
22. Simla.
23. Simla Hill States.
24. Bilaspur State.
25. Kangra.
26. Mandi State.
27. Suket State.
28. Chamba State

III.—Sub-Himalayan.

29. Ambala.
30. Kalsia State.
31. Hoshiarpur.
32. Gurdaspur.
33. Sialkot.
34. Gujrat.
35. Jhelum.
36. Rawalpindi.
37. Attock.

IV.—North-West Dry Area.

38. Shahpur.	44. Bahawalpur State.
39. Mianwali.	45. Muzaffargarh.
40. Montgomery.	46 Dera Ghazi Khan (including the Biloch Trans-Frontier tract).
41. Lyallpur.	
42. Jhang.	
43. Multan.	

valleys and foot hills, but amongst these is often very rich. Irrigation is derived from the numerous mountain streams, the waters of which are spread over the valleys and lower slopes by small artificial watercourses; grazing is plentiful and forests provide fuel and wood far in excess of local requirements. The climate is temperate in summer and rigorous in winter, the highest hills are covered with perpetual snows and in winter many of the tracts beyond the outer range are cut off from communication with the outside world by an impassable barrier of snow. The rainfall for this division averages 57 inches as compared with 26 inches in the province as a whole.

To the north-west of this area the Himalayas run into the Kashmir State, but throughout the length of the province, separating the hill country from the unbroken plains, runs a strip of fairly level land broken by foot-hills in which the proximity of the mountains affects the climate and rainfall. In summer the temperature rises to much the same height as in the plains to the south, but the winter is cooler, and throughout the year there is much more moisture in the atmosphere. The water level is close to the surface and there is much irrigation from wells; there is also some irrigation from intermittent torrents which descend from the hills behind Gujrat; and parts of Hoshiarpur, Gurdaspur and Sialkot are also irrigated by perennial canals which however give their main irrigation after passing through them into the lower plains. The rainfall for this portion averages 29 inches in the year.

The southern and major portion of the province lies in the plains, relieved here and there on the west by an outcrop of bare waterless hills; the eastern part of these plains lies in the Indo-Gangetic Plain and the Western in the North-West Dry Area. The two are mainly distinguished by the difference in rainfall and in water-level; the former has an annual rainfall of 21 inches as opposed to only 9 in the latter: previous to the days of extensive canal irrigation the two were very markedly different in fertility, and the western area consisted largely of bare expanses of desert. The spread of canal irrigation has modified the contrast and at the last census it was suggested that the districts of Shahpur, Jhang, Lyallpur and Montgomery, which lie on the dividing line and all of which receive much canal irrigation, might advantageously be grouped in the Indo-Gangetic Division. By nature they are more akin to the North-West Dry Area, and it is doubtful whether an artificial change in their irrigation justifies their exclusion from this division; such exclusion would render comparison with former statistics extremely difficult; it has therefore been decided to retain the former system of grouping in its entirety.

Land Tenure.

6. The Punjab is essentially an agricultural country farmed by peasant proprietors; the whole area is divided up into blocks of land known as villages; for each of these blocks the government maintains a collection of revenue records, the principal being known as the "Record of Rights" and containing lists of all the owners and tenants in the village together with detail of the lands owned or cultivated by each. The distinguishing mark of a village is that it has a separate record of rights, and the term is applicable to the whole tract of land dealt with in that record and not to the collection of houses in which the villagers live. The most usual forms of tenure can be indicated best by a description of the way in which a typical village has come into being; it must be understood that, whilst the process of evolution may be true of a large number of villages, it must not be taken to be of universal application. In its simplest form the village may be regarded as having been founded by one man, who, by merely taking possession or by receiving a grant from a local ruler, obtained the ownership of all the lands included within its boundaries; he cultivated some of these and regarded the remainder as his property, to be grazed upon or to be broken up at his pleasure. On his death the members of his family inherited his rights jointly, and each member probably cultivated separate plots and added to them by breaking up further areas in the waste, each however recognising that his rights were bounded by his share by inheritance. In the course of time family dissensions, or mere convenience, led some members of the family to regard the lands in their cultivating possession as their individual property but they had no grounds on which to base an exclusive claim to any portion of the unbroken

waste. In early days this separate ownership probably grew up without special agreement; hence in some cases it remained in the proportion of the shares by inheritance whilst in others the separate properties varied in size by reason of particular members of the family being more energetic in breaking up the waste or being stronger than their fellows and being able to exercise their acquisitiveness in excess of their theoretical right. In the course of time the custom arose, and has been given the sanction of law, that separation of joint lands should be by agreement or by application to the courts; such partition is usually made with reference to ancestral shares, modified by the facts of existing possession.

The tenure of the village lands depends mainly on the extent and nature of the partition that had taken place before accurate land records came into existence. If when these were first compiled the separate rights were found to be in direct relation to the theoretical rights by inheritance, then the rights in the undivided waste were held to be in the same proportion, and subsequent partitions were made on the basis of the family tree. If existing rights were found to be irreconcilable with the theory of proportional inheritance, the rights in the waste might be held to be in the ratio of the extent of existing rights of ownership in the cultivated land, or perhaps in the ratio of the revenue payable by each member of the village.

The original simplicity is complicated by the fact that original owners may have sold or gifted portions of their separate holdings; in some cases such gifts and sales have been understood to include the dependent share in the undivided lands, in others not. In cases where a share in the waste has followed the transfer of separated lands the effect is merely to introduce an outsider into the group of owners and to modify the shares in the joint property; in the reverse case the outsider becomes an owner of a specific plot of land only, whilst the original group of owners continue to have all the rights in the waste.

Each owner may cultivate his holdings or have it cultivated for him by servants or tenants, the most usual form of rent being a specified portion of the produce raised by the tenant.

Sometimes an owner may have had difficulty in securing tenants and has had to offer unusual attractions to obtain them; he may have guaranteed a fixity of tenure extending for their lives or even to their descendants; or he may have gone away and neglected his land, and the tenants may have gradually acquired prescriptive rights in his absence, which on his return he has found necessary to recognise. In these and in many other ways has arisen a class of tenant, known as an "occupancy tenant," who has an hereditary right to cultivate the land on payment of a rent to the owner which may or may not be an economic rent; in some cases such rent is merely nominal or is no more than the government revenue.

Very similar to the case of an owner whose land is in the possesson of occupancy tenants paying a nominal rent, is that of the superior and inferior owner; in this case the inferior owner exercises practically all rights of ownership except that he pays certain dues to a superior owner. Both occupancy tenants and inferior owners may or may not have the power to transfer their rights to persons other than their heirs, and in cases where they have not this power an attempt to do so may result in the land reverting to the full ownership of the owner or superior owner.

It is probable that in early days the local ruler was recognised as the ultimate owner of all land within his territory, and that individual land owners were regarded as holding from him; this view was gradually modified till it was merely recognised that the ruler had a right to a certain share of the produce of all lands, and this share was the original form of land revenue. In the present day, though the land revenue is collected in cash, it is based on the theory that government has a right to one-half of the net produce of the land after deduction of the cost of cultivation from the gross produce, the cost of cultivation including that portion of the produce which is retained by a tenant; in other words government is entitled to one-half of the rent received by a non-working landlord. In practice the cash land revenue nowhere approaches this theoretical right; but the important point is that land revenue is not a tax, but is closely related to a rent.

Land revenue is payable to government, but there is a class of people known as "jagirdars" who are entitled to the land revenue of particular tracts

of land. Such tracts are known as their "jagirs" and originated either as direct grants from government, or as a recognition of their former quasi-sovereign rights over the area.

We have now encountered the main features of the land tenures of the Punjab plains; the commonest type is that in which a landowner owns individual lands with full rights of alienation and disposal, together with a joint right in an undivided waste, this joint right usually being capable of realisation as an individual right by partition with the other sharers; such an owner may let his land from year to year to tenants who pay him a portion of the harvest as rent, and he is responsible to government for the revenue assessed on his individual land together with a share of that assessed on the joint village lands.

The theoretical account given above of the origin of this system explains the fact that it is usual to find the individual lands of one owner scattered about in small plots throughout the village; repeated partition leads to more and more scattered holdings, and it is quite usual to find an owner of no more than three acres with thirty or more separate fields scattered about over an area of two or three square miles. Repeated sub-division, and wide distribution of scattered holdings are the bane of the indigenous system of land tenure; it requires little imagination to picture the waste of effort, and the difficulties as to trespassing and rights-of-way. with which it must necessarily be connected.

The description given above applies, almost universally, throughout the central and south-eastern parts of the province; and it should be noted that these were the first parts to come under British rule, and also that the tenures in them resemble those in the United Provinces which had long been familiar to British administrators before the Punjab came under their sway. In the sandy stretches of the south-west, the hilly country to the north-west, and more than all in the Himalayan tracts, the distribution of rights was originally very different and the type of village described was unknown; but the early British administrators with pre-conceived ideas on these subjects managed to graft the types of land tenure with which they were familiar on to a countryside to which they were totally alien.

In the south-west the population was still largely nomadic and pastoral when it first came under British sway; dotted over the country were small hamlets occupied by a few persons who had built a well and cultivated a small patch of land round it; these people regarded the surrounding country as subject to their grazing rights, but had no sense of any joint ownership in the waste, and ascribed their ownership to the fruits of breaking up the soil and not to inheritance. Such small hamlets were artificially grouped in villages, and the theory of joint ownership of the waste within the boundaries of such villages was artificially introduced; at the same time vast areas of waste which had never been subject to the plough were found to be absolutely unappropriated and were, in accordance with local sentiment, declared to be government property.

In the north-west, strong warlike tribes had collected in fairly large villages for the sake of mutual protection, these villages being strongholds rather than agricultural settlements. Scattered round these strongholds were the small hamlets of the non-warlike population, who existed under the protection or subject to the tyranny of the leading tribes; their settlements were too unimportant to attack and usually consisted of a few houses built in the immediate vicinity of the lands cultivated by their owners.

In the Himalayas the dense forests and the precipitous nature of the country rendered cultivation possible only in isolated patches. Anyone who cleared and broke up a small area of land built his house in the clearing, and except in the more continuous and fertile valleys man was not able to satisfy his gregarious instincts. Each settler would collect his firewood and graze his cattle in the surrounding forests, and thus gradually create a right over the waste in the vicinity of his clearing; where clearings were close together convenience led to neighbouring settlers establishing joint rights in the waste, and as population increased and interests began to conflict specified areas of waste would become recognised as subject to the exclusive rights of user of several settlers.

Thus a whole valley, the whole of one side of a hill, or any other natural division of the country might become subject to the rights of user of several settlers who had individual cultivated clearings scattered about over it. These settlers with common rights would not necessarily be related and might belong to

entirely different tribes or castes. A small tract of country, subject to the common rights of user of persons residing in scattered residences over its surface, is the natural unit of these hills; such units are known by different names in different localities, and in many of the hill states they form the administrative unit and are known in English as villages; in others they are so small as to be useless as administrative units and have been grouped together in blocks to suit the local form of administration. Throughout the Himalayas the village unit, as demarcated for census purposes, is an artificial one; and no statistics concerning the number, size or proximity of villages within the Himalayan tract are of any utility whatsoever.

A comparatively modern innovation in land tenure and in types of villages has been introduced during the process of colonisation of government waste lands in the west which have been rendered fit for cultivation by the introduction of canal irrigation. On being irrigated these wastes were divided up into villages of convenient size and the lands of each village which were fit for cultivation were granted to settlers from the old districts. The grants took various forms; some whole villages were let out to capitalists on payment, others were granted to persons who deserved well of government; more usually however separate plots in each village were granted and the grantees were required to take up residence and build houses on a site set apart for the purpose. In the first instance the grantees were usually given rights of occupancy tenants holding under government, various conditions being attached to the tenancies; these always included the duties of taking up permanent residence and cultivating the land allotted; other conditions such as the keeping of brood mares for horse-breeding, the breeding of camels, the introduction of scientific methods of agriculture, the cultivation of superior varieties of particular crops, and so on, were sometimes enforced in addition. In all villages a certain area was not allotted and was retained by government to be utilised as grazing grounds or for some other common purposes.

After the settlers had been some years in occupation and had demonstrated their intention of taking up permanent residence and had made satisfactory progress in breaking up and cultivating the lands allotted to them the majority of those who did not hold on special conditions were allowed to purchase proprietary rights in their tenancies. After they had done so the type of village evolved closely resembled that in the south-eastern plains, the main difference being that instead of the waste land being common property it was unallotted and remained the property of government though devoted to the common use of the villagers. Such villagers can, of course, trace no descent from a common ancestor, and do not form such a corporate body as the inhabitants of old villages; but at the time of colonisation efforts were made to group together members of one or two associated castes coming from the same part of the province, and though the villagers are not necessarily connected by family ties, they are far from being chance collections of miscellaneous origin.

7. Of the twenty-five million inhabitants of the Punjab no less than fourteen and three quarter millions are of agricultural occupation, whilst many more follow agricultural pursuits in addition to some other occupation. Subsidiary Table I at the end of this chapter presents a few agricultural statistics, and it is necessary to explain the terms used therein. "Cultivable area" includes land actually under cultivation, fallows, and waste available for cultivation; such waste does not include areas in which cultivation is forbidden by law or custom, such as reserved forests or common lands set apart for a specific purpose. It does however include common lands which can be made available for cultivation by partition even though such partition has not been effected. "Gross cultivated area" means the area actually sown in any one year with no deduction for failure of crops, any land sown at both seasons of the year (*i. e.*, double-cropped) being counted twice. "Net cultivated area" means the area sown in any one year, the double-cropped area not being counted twice. In other words net cultivated area refers to the area of land sown, whilst gross cultivated area refers to the area of crops sown; to avoid confusion I shall generally refer to gross-cultivated area as the sown area. Cultivation.

It will be noticed that both gross and net cultivated areas refer to areas of a particular year and will fluctuate annually according to the nature of the

conditions at the time of sowing; neither of them include land which lies fallow for the whole year, though such land may be regularly though infrequently cultivated.

According to the subsidiary table, 65 per cent. of the total area of the province is fit and available for cultivation, whilst the net and gross cultivated areas amount to 59 and 67 per cent. respectively of the cultivable area; in other words the net and gross cultivated areas amount to 39 and 44 per cent. of the total area of the province. The table also shows that 40 per cent. of the gross cultivated area, or nearly 18 per cent. of the total area, is irrigated. The figures in the table however include many for States which, owing to an incomplete system of land and crop survey, are of doubtful accuracy. The conditions of agriculture within the States of the Punjab closely resemble those in adjacent British Territory, and the figures which will be discussed in this and the two following paragraphs are those for British Territory only which rest on an unassailable basis owing to the completeness of the land revenue records.

In the records-of-rights, which are revised every four years, the term cultivated area includes fallows which have been under crops sufficiently recently to warrant the belief that their cultivation has not been permanently abandoned, and this cultivated area is described as irrigated from wells or canals if it can be, and has recently been, so irrigated, notwithstanding the fact that it was not so irrigated in the year when the record was prepared.

According to the records-of-rights prepared in the four years 1914 to 1917, which are representative of the last decade, the cultivated area amounted to 29,140 thousand acres in British Territory excluding the tribal area across the border of Dera Ghazi Khan. The total area of this tract is 27,280 square miles, so that the cultivated area amounts to 47 per cent. of the total. Of this twenty-nine odd million acres of cultivated land, exactly one half was entirely dependent on rain for its moisture, 17 per cent. could receive irrigation from wells, 27 per cent. from canals and about 1 per cent. from other sources of irrigation; whilst the remaining 5 per cent. was liable to inundation from rivers.

Turning now to records of the area sown each year, the average for the decade since the last census amounts to 27,887 thousand acres, or 45 per cent. of the total area, a very slight difference from the gross cultivated area shown in the subsidiary table which includes Punjab States and was worked out from the figures for 1921 and not for an average of ten years. Of this sown area, 13 per cent. was actually irrigated from wells, 30 per cent. from canals, and rather less than 1 per cent. from other sources; this shows that 44 per cent. of the sown area was irrigated as compared with 40 per cent. shown in the subsidiary table.

Irrigated crops are less liable to failure than those which depend entirely on rain or natural inundation for their moisture; the figures (averages of the ten years since last census) for crops grown with and without irrigation are shown in the margin, the units being thousands of acres; it will be seen that whilst rather less than 44 per cent. of the crops sown are irrigated, yet, owing to the smaller proportion of failure amongst these, no less than 49 per cent. of the matured crops are irrigated; remembering that the yield of all crops is materially increased by irrigation it is clear that considerably more than half the produce of the province is grown on irrigated lands.

	Irrigated.	Unirrigated.
Sown ..	12,130	15,757
Failed ..	869	4,027
Matured ..	11,261	11,730

The revenue department, in addition to compiling statistics of area actually sown and matured each year, prepares an estimate of considerable accuracy of the total produce of the principal crops; the marginal table has been prepared from these statistics and estimates in order to show the relative importance of the principal crops produced. It is of course impossible to value grain produced over a term of years in different places, and the last column of figures is inserted merely as an indication of comparative values

Crop.	Sown area in thousands of acres.	Produce in thousands of tons.	Value in lakhs of rupees.
Autumn crops—			
Sugar cane ..	412	315	258
Rice	829	401	181
Maize	1,123	379	171
Bajra	2,355	279	147
Cotton	1,540	373 (bales)	123
Jowar	1,021	110	53
Spring crops—			
Wheat	8,951	2,840	1,620
Gram	3,873	2,840	1,620
Oilseeds	1,172	161	130
Barley	1,099	308	126

and must not be given any meaning beyond this. It is calculated from averages of normal prices at harvest time in the largest producing districts; these normal prices are fixed independently for each district by the revenue department, and were last revised in 1916-17.

The ten crops given in this table account for eighty per cent. of the total area shown, and on them the agricultural welfare of the province principally depends; amongst them it will be seen that the spring crop far outweighs the autumn crop in importance, and that the value of wheat alone equals that of all the others put together.

8. The importance of irrigation in provincial agriculture has been demonstrated in the last paragraph; the sources from which irrigation is derived are shown in the margin where the source of supply for every unit of one thousand acres is shown. Canals irrigating 688 out of every thousand acres head the list in importance, and of these the majority are owned and worked by Government. Next come wells which irrigate 299 out of every 1,000 acres; these are in general private property owned by the landowners or by groups of landowners. The irrigation shown as from "other sources" is mostly by lift from ponds, rivers and marshes, though it includes a variety of other methods of little importance. Irrigation.

Government canals ..	648
Private canals ..	40
Tanks ..	1
Wells ..	299
Other sources ..	12
	1,000

It may be noted that low-lying lands in the neighbourhood of rivers are often inundated at flood time and that this fact assists their cultivation; such inundated lands are usually regarded as unirrigated. The fertilising floods are often spread over a larger surface by short cuts and dams than they would reach if left to themselves, whilst sometimes inundation canals of considerable magnitude carry the waters far beyond their natural limits; there is then no definite border line between lands inundated directly from rivers and termed unirrigated, and those which are irrigated by inundation canals.

The marginal figures show the percentage of the average matured area which was irrigated from canals and wells in the decade before the census; the districts have been arranged in order to show in which irrigation plays the most important part; the new district of Sheikhupura is included with Gujranwala as separate figures for it were not available. It will be seen that in eleven out of the twenty-eight districts named more than half the matured crops had received the benefits of irrigation.

PERCENTAGE OF MATURED CROPS THAT ARE IRRIGATED.

	Total.	From canals.	From wells.
Lyallpur	98	97	1
Montgomery ..	87	64	23
Multan	87	73	14
Jhang	86	58	28
Lahore	78	56	22
Muzaffargarh ..	77	53	24
Gujranwala	76	55	21
Shahpur	75	64	11
Amritsar	70	40	30
Jullundur	54	..	54
Sialkot	53	5	48
Ferozepore	46	32	14
D. G. Khan	43	32	11
Ludhiana	37	9	28
Karnal	36	22	14
Gujrat	36	21	15
Gurdaspur	28	11	17
Rohtak	27	19	8
Kangra	26	26	..
Gurgaon	17	6	11
Hissar	16	15	1
Mianwali	12	5	7
Hoshiarpur	11	2	9
Attock	9	1	8
Ambala	6	..	6
Jhelum	5	..	5
Rawalpindi	2	..	2
Simla	..	..	..
British Territory ..	48	35	13

Lands irrigated from wells are the most fertile in the province, for the expense and labour of this type of irrigation prevents its adoption except with the prospect of a commensurate return, and leads to an intensive system of cultivation, whilst the continual presence of the cattle required to work the well provides manure in excess of that available for other types of cultivation. During the last decade the number of masonry wells in use increased from 245,239 in 1911 to 265,879 in 1920; but it cannot be assumed that the total number of wells increased proportionately as irrigation from wells is extended in seasons of light rainfall and contracted in other seasons; considerable areas of land can be irrigated from both wells and canals, and temporary conditions decide which system is adopted. During the decade the largest area sown with well irrigation was 3,875 thousand acres in 1920-21 whilst the smallest was 2,951 thousand acres in 1917-18; the latter year was one in which unirrigated cultivation was more extensive than in any other of the decade.

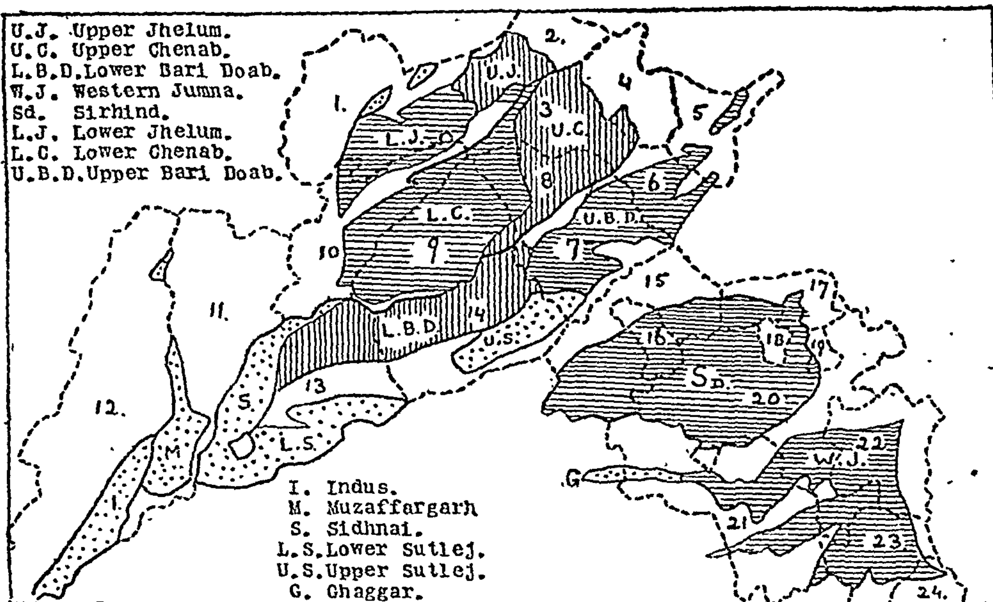
Well irrigation demands a fairly high level of the sub-soil water. The districts which employ wells most largely are Jullundur, Sialkot, Amritsar, Ludhiana, Jhang, Muzaffargarh, Montgomery, Lahore and Gujranwala. Except for Jhang, Muzaffargarh and Montgomery, these are all grouped together on the Southern side of the Sub-Himalayan tract; to their North lie districts where there is sufficient moisture for unirrigated cultivation, whilst to their South the water level sinks and renders well irrigation more difficult. In the former districts the lift is so small that the wells can be worked by Persian Wheels which carry a continuous band of earthenware pots; further South though wells are in use they are more scarce and their depth is so great that the Persian Wheel has to be replaced by the less efficient rope and leather bucket.

The well has lost much of its importance since the introduction of extensive canal irrigation. Without its canals the Punjab would be unable to support its population, and the main factor in the movement of the rural population for the last twenty years has been the extension of the canal system. Districts such as Jhang, Lyallpur and Montgomery which now support a dense agricultural population were practically desert country before the canals opened them up, and were then inhabited by a very sparse population of shepherds and graziers.

The inset map shows the areas commanded by the more important canal systems of the province and on the next page are reproduced a few leading figures concerning them.

No. 12. CANAL IRRIGATION IN THE PUNJAB.

Vertical shading shows areas commanded by canals opened since 1911.
Horizontal shading shows areas commanded by canals opened before 1911.
Dotted shading shows areas commanded by inundation canals.



1. Shahpur. 2. Gujrat. 3. Gujranwala. 4. Sialkot. 5. Gurdaspur. 6. Amritsar. 7. Lahore. 8. Sheikhupura. 9. Lyallpur. 10. Jhang. 11. Muzaffargarh. 12. Dera Ghazi Khan. 13. Multan. 14. Montgomery. 15. Ferozepore. 16. Faridkot. 17. Ludhiana. 18. Malerkotla. 19. Nabha. 20. Patiala. 21. Hissar. 22. Karnal. 23. Rohtak. 24. Delhi.

PRINCIPAL CANAL SYSTEMS.

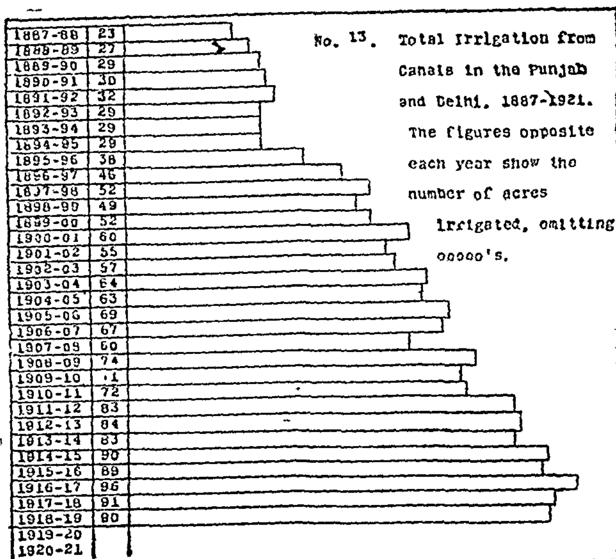
1	2	3	4	5	6	7	8	9
Serial No.	Name.	Length of Main Line in Miles.	Length of Distributaries in Miles.	Culturable Area commanded in thousands of acres.	Average Area irrigated annually in thousands of acres.	Date of commencement of construction.	Date of first irrigation.	Date of completion of construction.
1	Western Jumna ..	329	1,890	2,324	803	Before annexation; 1888—Sirsa Branch	1820; 1891-92	1886; 1895
2	Sirhind ..	537	3,423	3,918	1,437	1867-68	1883-84	1886-87
3	Upper Bari Doab ..	340	1,545	1,504	1,163	1849-50	1860-61	1878-79
4	Lower Bari Doab ..	132	1,186	1,409	878	1906	1913-14	31-3-1917
5	Upper Chenab ..	173	1,178	1,633	648	1905	1912-13	31-3-1917
6	Lower Chenab ..	427	2,242	2,583	2,317	1884 (a); 1890	1887 (a); 1892	1889-1900
7	Upper Jhelum ..	128	642	572	348	1905	1915-16	31-3-1917
8	Lower Jhelum ..	196	892	1,252	807	1897	1901	31-3-1917
9	Upper Sutlej (Inundation Canals).	328	394	900	328	Some existed before annexation and some added later; 1855-1870.	1855; 1884	1858-59; 1885-86
10	Sidhnai ,,	68	255	344	270	1883-84	1886	1886
11	Indus ,, ..	442	301	423	237	Existed before annexation.	Prior to 1849	1849-50
12	Shahpur ,, ..	71	66	63	37	1862 to 1864	1870	1870-71
13	Ghaggar ,, ..	97	34	108	25	1896-97	1897	1898-99
14	Lower Sutlej ,, ..	397	287	905	288	Before annexation.	Were in operation prior to the annexation of the Punjab by the British	Some improvements were finished in 1895.
15	Chenab ,, ..	266	64	360	183	Before annexation.	Were in operation prior to the annexation of the Punjab by the British	Ditto.
16	Muzaffargarh ,, ..	422	718	675	368	Before annexation.	Were in operation prior to the annexation of the Punjab by the British	Some improvements were finished in 1896.

(a) As an inundation canal system.

Note.—The average area recorded in column No. 6 is that for the ten years 1911-12 to 1920-21 inclusive. But in the case of the three canals of the Triple Project which have not been in existence for ten years, the area which they are designed to irrigate is shown instead.

The first eight of these are perennial canals with permanent headworks on the large rivers of the province, so designed that the canals run even when the rivers are at their lowest. The remainder are groups of small canals, few of which extend very far inland from the rivers from which they take their supply, and in general they only come into operation when the rivers are in flood.

The records of area actually irrigated are available back to the year 1887-88 when all the canals then in existence irrigated 2,341 thousand acres, since then the extension and improvement of existing canals and the construction of new ones has led to a steady increase in irrigation as is shown in the marginal diagram. In 1920-21 the total area irrigated amounted to 10,274 thousand acres and the greatest area ever irrigated in one year was 10,457 thousand acres in the previous year.



The Western Jumna Canal, which was taken over in the early half of the 19th century, irrigates portions of the Karnal, Rohtak and Hissar districts, and small areas in Patiala State and the Delhi Province. The Sirsa Branch, which irrigates portions of Patiala and Hissar, was first opened in 1891.

The Upper Bari Doab Canal has also been in existence so long that, as in the case of the Western Jumna, immigration to the areas it commands had already taken place before the first census and therefore cannot form the subject of statistical study. It is supplied from the Ravi river and irrigates very large areas in Lahore and Amritsar and a comparatively small area in Gurdaspur.

The Sirhind Canal was first opened to irrigation in 1883-84, it distributes the waters of the Sutlej in Ludhiana and Ferozepore Districts, and in the Patiala, Jind, Nabha and Faridkot States.

The Lower Chenab, with headworks at Khanki on the left bank of the Chenab, was first opened in 1887-88 as an inundation canal and was opened as a perennial system in 1892, but was extended and improved constantly and scarcely reached its present scale of irrigation till 1911. It irrigates practically the whole of the Lyallpur District and parts of Gujranwala, Sheikhupura and Jhang; the area which it commands was mainly uncultivable waste before it received irrigation and the canal led to an enormous migration from the congested districts to the newly opened up country. As the greater part of the land was government property colonisation was carried out by government which granted land on various conditions to residents of thickly populated districts; most of these grantees have now become owners of the land which they were first granted as tenants. The result is that the whole tract is populated by persons who are connected by relationship and social ties with inhabitants of different districts all over the Punjab, and the colony is a focus of migration as the inhabitants and their relations are constantly passing backwards and forwards between it and the districts in which their ancestors lived and in which many of the inhabitants still have proprietary interests.

The Lower Jhelum Canal is of much more recent construction and was first opened to irrigation in 1901; it irrigates a large portion of the Shahpur District and a smaller area in Jhang; this too commands an area which was very thinly populated when in its natural condition, and of which much was government waste available for cultivation. Here too is now collected a population including persons keeping in constant touch with their relations in districts scattered throughout the province.

The other three large perennial canals that now contribute to the fertility and wealth of the province have all been opened to irrigation during the decade since the last census. They form collectively what has been known as the Triple Canal Project and are inter-related in a peculiar way. The districts of Montgomery and Multan included vast areas of waste, which, could they but be irrigated, would have formed yet another area in which to found a canal colony and still further relieve the pressure of the ever-growing population of the old districts. The difficulty was that the Ravi, the only river from which direct irrigation could be obtained, was already pouring practically the whole of its cold weather supply into the Upper Bari Doab Canal; the waste area available could have been irrigated from it in the flood season only, and that would not have rendered it suitable for colonisation on a large scale. On the other hand the Jhelum river carried a supply which at its lowest was well in excess of the requirements of the Lower Jhelum Canal. The solution of the difficulty, which is now an accomplished fact, was to use the surplus water of the Jhelum for the ultimate irrigation of the tracts in Montgomery and Multan. The Upper Jhelum Canal takes water from the Jhelum and irrigates part of the Gujrat district, but carries a far bigger supply than is required for that irrigation alone; the surplus, after flowing right across the Gujrat District, is released into the Chenab river a little above the head-works of the Lower Chenab Canal. Thus reinforced the Chenab river carries a supply in excess of that required for the Lower Chenab Canal and this supply is now taken off higher up the river by the Upper Chenab Canal which irrigates large areas in Gujranwala and Sheikhupura Districts and still has a large flow left which it empties into the Ravi river. This supply is then taken out of the river on the opposite bank by the Lower Bari Doab Canal which irrigates the Montgomery and Multan Districts and has thus opened up a new area for colonisation. Actually no water of the Jhelum gets on to the land in the Lower Bari Doab Colony, but it does cross the Chenab and by feeding the Lower Chenab enables the Upper Chenab to draw off some of the waters of the Chenab without prejudice to the Lyallpur colony and it is the waters from the

Chenab that cross the Ravi and find their way into the Montgomery and Multan Districts.

Work on the Upper Jhelum commenced in 1905 and it was opened to irrigation in 1915 and completed in 1917. It was designed to take in a supply of 8,500 cubic feet per second at the head and to deliver 7,812 of these into the Chenab; it commands 571,783 acres and is intended to irrigate about 348 thousand acres. The total area irrigated during the first few years after it was opened is shown in the margin. It irrigates a tract which is already inhabited and in the ownership of the residents; it is therefore unlikely to cause immigration to any great extent though it will add to the prosperity of the tract irrigated and enable it to support a larger population.

Year.	Acres.
1916-17	117,605
1917-18	177,006
1918-19	246,609
1919-20	298,857
1920-21	345,189

The Upper Chenab which was commenced in 1905 and completed in 1917 was first opened to irrigation in April 1912. It is designed to use 4,944 cubic feet per second for irrigation and to pass on 6,750 into the Ravi; this allows for the irrigation of 648 thousand acres out of the 1,533 thousand which it commands, and it has already worked up to an irrigation approaching this figure as will be seen from the figures in the margin. The areas it irrigates in Sialkot and Gujranwala are in the hands of private owners and give no room for colonisation, but there are large plots of government waste in Sheikhupura which are already being colonised rapidly.

Year.	Acres irrigated.
1912-13	123,236
1913-14	164,110
1914-15	211,882
1915-16	325,062
1916-17	437,477
1917-18	382,935
1918-19	426,864
1919-20	542,656
1920-21	601,347

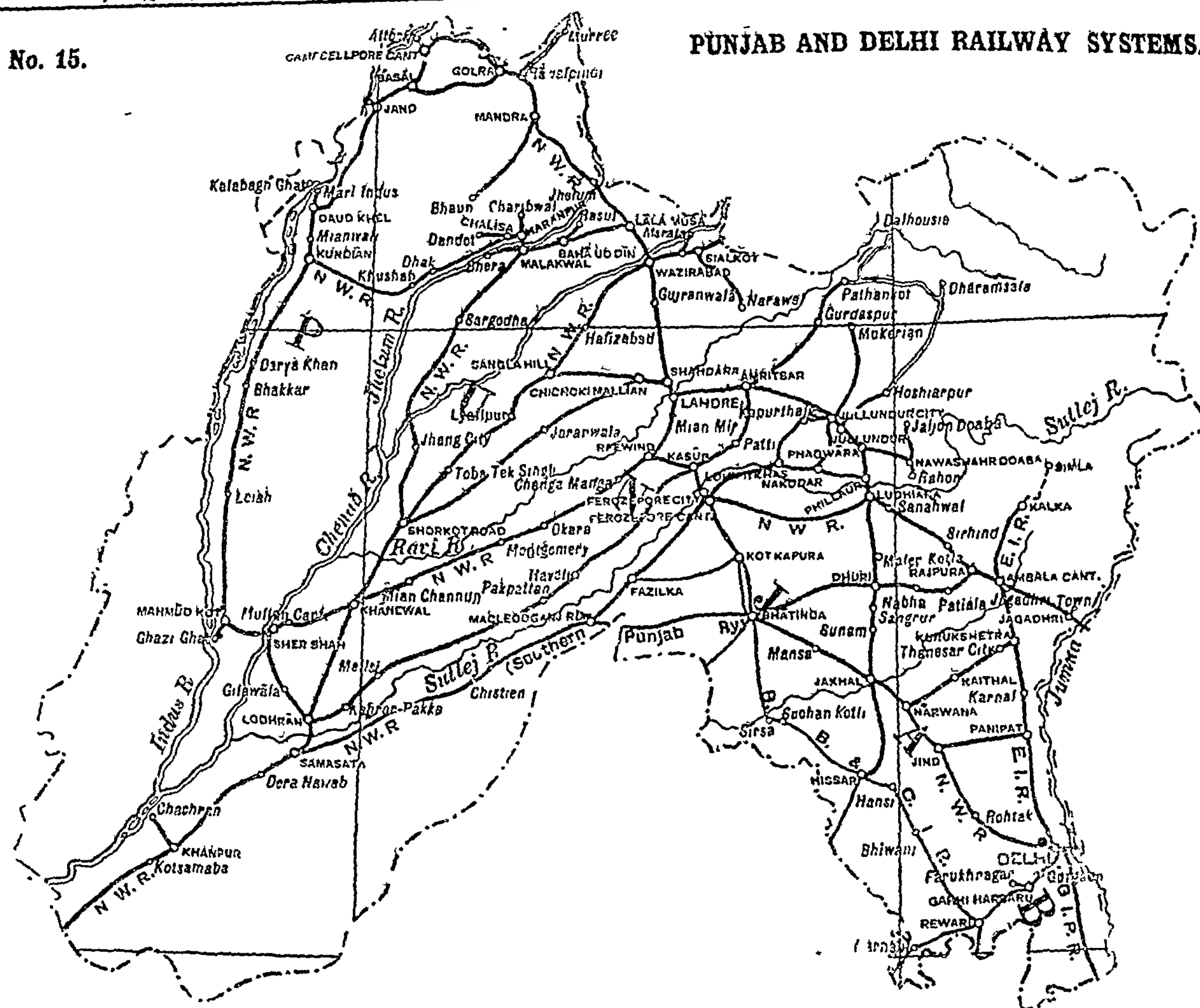
The Lower Bari Doab was commenced in 1906 and completed in 1917; the first irrigation was given from it in July 1913, and the areas irrigated till the end of the decade are shown in the margin. It is designed for a supply of 6,750 cubic feet per second at the head, which is the exact amount rendered available by the outflow of the Upper Chenab; this is to irrigate about 878 thousand out of the 1409 thousand acres which are commanded by it.

Year.	Acres irrigated.
1913-14	73,578
1914-15	189,204
1915-16	283,294
1916-17	514,936
1917-18	621,600
1918-19	678,004
1919-20	869,432
1920-21	852,638

None of the three canals could work up to their proper capacity until the Upper Jhelum was completed in 1917; and it is probable that the irrigation from all three will increase considerably before they settle down to steady normal working.

9. The Punjab is fortunate in possessing an extensive system of railway communications. The main line of the North Western Railway from Karachi enters the province in the extreme south-west, and runs up to Samasata in Bahawalpur State whence it divides and connects up with a system of lines running more or less parallel with the great rivers and spreading out like the leaves of a fan till they reach another main line which runs along the northern boundary of the province from Attock *via* Rawalpindi and Lahore to Ferozepore and thence to Delhi. Communications.

This fan-shaped system of lines serves the whole of the western part of the province within a triangle based on Campbellpur and Ferozepore with its apex at Samasata.



No. 15. **PUNJAB AND DELHI RAILWAY SYSTEMS.**

From Lahore to Delhi there are two main lines, one *via* Ferozepore and Bhatinda and the other following the course of the Grand Trunk Road through Amritsar, Jullundur, Ludhiana and Ambala and thence through part of the United Provinces. These two main lines have numerous cross-branches and are also connected with other railways, such as the East India Railway from Delhi to Kalka *via* Ambala; and the Bombay, Baroda and Central Indian Railway from Delhi to Rewari and thence to Bhatinda *via* Sirsa and Hissar; together these various lines and branches form a very complete net-work over the central and south-eastern parts of the province.

The only portions of the province not served by railways are the Himalayan tract in the north-east, in which the only line is the short Kalka-Simla Railway, and the Dera Ghazi Khan District and the eastern part of the Bahawalpur State. The western part of the province, though well served by the fan-shaped system of lines radiating from Samasata, lacks railway communication in a transverse direction; the presence of the rivers and the difficulties in connection with bridging them have prevented the construction of lines running from north-west to south-east.

The main external trade of the Punjab passes down the North Western main line to Karachi, whilst the main lines to Delhi and thence direct to the ports of Bombay and Calcutta and other towns of the Indian continent provide the other most important external trade routes.

The following account of the construction of the Punjab railway system is taken direct from Mr. Calvert's "Wealth and Welfare of the Punjab":—

"The first railway line (Amritsar to Lahore) was put under construction in 1856 and opened for traffic in 1861. Wood had to be used for fuel. The line from Lahore to

Multan, which at that time was connected with Karachi by the boats of the old Indus Flotilla, was opened in 1865. Coal was introduced in 1872, in which year one goods train left Lahore daily for Ghaziabad. Through communication with Calcutta and Bombay was established in 1883. Thereafter progress was steady, if not rapid, as the following details show :—

Main Line.—			
South to Lahore	231	miles, opened in	1870
Lahore to West	418	"	1878
Lahore to North	242	"	1880
Branches—			
Golra-Basal	47	"	1881
Amritsar-Pathankot	67	"	1884
Rajpura-Bhatinda	107	"	1889
Sind-Sagar	342	"	1890
Sialkot (1884) Jammu	36	"	1890
Raewind-Ferozepore	33	"	1892
Southern Punjab, main line	400	"	1897
Narwana-Kaithal	23	"	1899
Kundian-Campbellpore	120	"	1899
Ferozepore-Bhatinda	55	"	1899
Wazirabad-Khanewal	201	"	1900
Ludhiana-Jakhal	79	"	1901
Kalka-Simla	59	"	1903
Ludhiana-Macleodganj	152	"	1906
Jech-Doab	149	"	1906
Shahdara-Sangla	55	"	1907
Khanewal-Lodhran	56	"	1909
Amritsar-Patti (1906) Kasur	54	"	1910
Kasur-Lodhran	208	"	1910
Khanpur-Chachran	22	"	1911
Chichoki-Shorkot Road	136	"	1911

Notes on the developments which have taken place during the last decade, together with figures bringing this account up to date, will be found in paragraph 39.

The road communications are far less extensive and connected than the railway system; the only coherent system of metalled roads is that connected with the Grand Trunk Road which runs continuously from Calcutta to Peshawar and in its passage through the Punjab connects Delhi, Karnal, Ambala, Ludhiana, Jullundur, Amritsar, Lahore, Gujranwala, Jhelum and Rawalpindi. This road is metalled throughout its length and has recently been much improved by the construction of road bridges over the great rivers of the Punjab, all of which it crosses. Metalled feeder roads branch off from the Grand Trunk Road for short distances throughout its length, the most important being—from Delhi to Gurgaon and Rohtak and to smaller places beyond them; from Thanesar to Pehowa and Chachchrauli; from Ambala to Kalka and Simla; from Rajpura, near Ambala, to Patiala and Sangrur; from Ludhiana to Malerkotla and Sangrur; from Ludhiana to Ferozepore; from Jullundur to Hoshiarpur; from Lahore to Ferozepore and to Sheikhupura; from Gujranwala to Hafizabad and to Sialkot; from Wazirabad to Sialkot and thence to Jammu; and from Rawalpindi into Kashmir *via* Murree.

Other isolated systems of metalled roads are in existence round about Lyallpur; from Multan to Muzaffargarh and thence to Dera Ghazi Khan, in which the presence of a boat-bridge over the Indus only affords through communication in the cold weather; and from Pathankot to Dalhousie and through the Kangra Valley to Kangra, Dharmsala and Baijnath.

Numerous unmetalled roads traverse the country in all directions, except in the west which is badly provided with road communication; these roads are often metalled for a few miles where they approach a town or a line of railway. Unmetalled roads provide all that is needed for the indigenous system of transport of agricultural produce by bullock cart, but are of little use for lighter vehicular traffic or for motor transport.

The extensive canal system of the province supplements the road communications to a very large extent; the main lines of the canals run between broad banks and usually one of these is kept open to bullock carts and other heavy traffic whilst the other, though unmetalled, is kept in excellent repair and, except

in the rains, provides a first-class motor road which, though not open to the general public, can be used by permission when occasion requires.

The rivers and a few of the canals provide facilities for waterborne transport but the strength of the current prevents any regular up-stream traffic and they are mainly used for floating timber from the forests of the Northern hills to the railway system of the plains.

Except in the west the combined systems of communication are excellent; but in the west the scarcity of metalled and even of unmetalled roads allied with a railway system which has few lines running from west to east leaves much to be desired and the communications are sadly behind the requirements of the rapidly increasing population of the canal colonies.

The postal and telegraph systems of the province are very complete, and the most inaccessible spots have unexpectedly frequent deliveries. The postal authorities have done much to hasten the improvement of road communications in the hills by the adoption of motor services beyond the limits of the railways. Railway and Canal telegraph lines extend to tracts beyond the reach of the Government telegraph system, and these can be used for official purposes and, in cases of emergency, by the general public.

A notable development of the past decade has been the extension of the telephone system; many towns have small systems of their own and trunk lines connect Delhi, Ambala, Kalka, Simla, Jullundur, Amritsar, Lahore and Rawalpindi and extend into the North-West Frontier Province.

Civil wireless telegraph stations are in existence in Delhi, Jutogh (Simla) and Lahore; there is also a military radio station in Rawalpindi, whilst the Royal Air Force maintain stations in Lahore and Ambala.

Rural Economy.

10. Under former rulers the revenue necessary to support them and their large armies and numerous courtiers was collected in kind and was only limited by the cultivators' ability to pay; and the authorities were always ready to eject him in order to install anyone who would pay more revenue. Anything which a man produced in excess of his requirements was taken from him in the form of revenue, whilst, even had he been able to keep a surplus from the revenue collector, the absence of communications and markets prevented him from profiting by its sale. In these conditions there could be no rent over and above the revenue, and land possessed no capital value.

The village was in every respect self-supporting; it had its own carpenter, blacksmith, potter, weaver and other artisans, all of whom rendered services to the agriculturists for which they were paid by shares of the harvested grain; petty shopkeepers existed in every village and were mainly paid in kind. Cash was practically unknown to the cultivator; the only form of capital he could produce was sunk in jewellery which was generally concealed on account of the insecurity of the times. As a result of these conditions no members of the rural community possessed fluid capital; land had no value both because there was no one to purchase it and because there were no excess profits to be made from it; sales of land were practically unknown before the advent of British rule.

The immediate result of the British occupation was to introduce security of tenure and a greatly reduced revenue.* The reduction immediately created a surplus, and, with the growth of communications, markets came into existence and this surplus became saleable. This encouraged extension of cultivation, the more so because the land revenue was fixed for long periods and during their continuance no extra revenue was demanded on account of new cultivation. As cultivation was extended and the surplus for sale became larger and larger a very large export trade was slowly established. In old days, there being no surplus even in normal years, the failure of the monsoon rendered famines inevitable; at the present day irrigation renders the results of a bad monsoon less disastrous whilst the deficit in produce does not lead to famine so much as to reduction of export. The normal export provides a margin up to which produce may be decreased without stinting the province. Export also tends to prevent violent fluctuations in price as, unless the produce of any year is insufficient to meet provincial requirements, prices will be governed by world prices and will not vary so readily as a result of local seasonal conditions.

* In ancient days the revenue demanded averaged about 30 per cent. of the gross produce and rose to considerably more provided it could be taken without annihilating the producer; it is estimated that the present revenue amounts to about 5 per cent. of the gross produce.

All these facts have led to an amazing increase in the productivity of the land and the prosperity of the people. The creation of an agricultural surplus led to the possibility of rent and with its advent arose the new relation of land-owner and tenant, the former being able to live without expenditure of his own energy and resources; land immediately gained a commercial value and sales and mortgage became common.

The whole course of British Rule has been marked by rapidly increasing land value; up to about twenty years ago the land values were only such as were warranted by the increase in production and prices, but there is little doubt that during the last twenty years they have been more than economic. This is mainly due to speculation in land, encouraged by the steadily rising prices; it has been rendered possible by the fact that cultivators have no means of investing capital except in land or jewellery. With them spare cash has generally gone in unproductive expenditure or in land purchase; and the fact that purchase of land may not return interest on their money is no bar to such purchase.

The increasing prosperity of the people and increase in land values has been accompanied by a great increase in indebtedness. Directly the British occupied the country the revenue, though reduced, was made payable in cash and was fixed irrespective of seasonal variations (in former days the revenue though excessive had perforce been limited by the produce available;) at the same time the British paid the army and the large number of labourers employed on public works in cash. The cultivator, who had no experience of cash transactions, was suddenly asked for regular payments in cash; and at the same time other classes of the community became possessed of cash which they spent in the new markets, thus creating a cash capital which drifted to the local shopkeepers and moneylenders. The conditions necessary to the growth of borrowing were brought into operation—the cultivator needed cash and possessed a valuable commodity in his land on which he was able to raise credit, and the local shopkeeper had amassed a cash balance and was in a position of power when dealing with the cultivator who had no knowledge of cash values; the cultivator in spite of his increased prosperity immediately began to borrow from the moneylenders. In the early days of this movement, when land values were still small, the moneylender advanced money against the coming crop; communications and markets being yet in their infancy the price of the future crop was entirely dependent on the season and hence the moneylender's business was risky; on this account he was entitled to, and did, charge very high rates of interest. As land value increased, and as the moneylender found that the new courts of law would enforce his claims, he began to advance money against the land rather than against crops, and in doing so did not reduce his traditional high rates of interest. The growing impoverishment and financial subjection of the agricultural classes caused great anxiety to government as far back as 1872; many remedies were tried, amongst them the introduction of elastic systems of revenue varying with the nature of the season, and the advance of government loans to agriculturists. All these proved insuffiicent to stop the evil and, after much discussion, the Land Alienation Act of 1901 was introduced; under its provisions a member of an agricultural tribe may not sell land to anyone except another member of such a tribe nor may he mortgage the land to a non-agriculturist unless the terms of the mortgage include provision for automatic redemption. Since the passing of that Act the financial position of the agricultural classes has undergone steady improvement, sales and mortgages are still extremely frequent, but the balance is in favour of the agriculturists. On the other hand the Act does not appear to have reduced the credit necessary to the conduct of cultivation nor has it led to a decrease in the value of land, which is still freely transferred amongst the agricultural tribes. In some cases members of agricultural tribes have taken to moneylending but, even so, transfer of land to them is less harmful than to the professional moneylender for they are interested in land and realise the factors necessary to its productivity. Continued sub-division of holdings encourages sale for many owners have holdings smaller than that which they could cultivate and are potential purchasers; the scattered nature of holdings may render one plot far more desirable to the neighbouring owner than to its own owner whilst the small size of the plots renders their purchase well within the credit of the villagers. The absence of industries and opportunities for investment and the lack of economic knowledge allow small owners to purchase

land at more than its economic value. As a result sales and mortgages are still excessive in number and extent but do not prejudice the agricultural community as a whole.

The enormous amount of capital sunk in the purchase and mortgage of land has not been a source of benefit to the land itself; the major portion has been dissipated and the only forms of permanent improvement left by the ancestors of the present population are found in the existence of wells and of a few small embankments to prevent floods, in a certain amount of levelling and in the existence of trees which afford timber and shade. Exceptions to this may be found in the hills where the pressure on resources has led to the laborious terracing of otherwise uncultivable hill-sides and, possibly, in the new canal colonies where a more enlightened spirit is beginning to be manifested. On the other hand government has created improvements which affect vast areas, such, for instance, as the great canal and railway systems and the less advanced road systems. It is unfortunate that the direct financial profits which have attended the construction of canals and railways were not also available from roads, for whilst the former are well up to the requirements of the province the latter are woefully undeveloped.

The ancient system of cultivation naturally was limited to the production of food and other local requirements and land was not devoted to the crops for which it was most suited. The absence of surplus did not encourage extension of cultivation and hence plenty of land was available so that each cultivator was able to raise his crops without resort to laborious intensive cultivation. The extensive system of tillage and limited nature of crops entailed work only at certain periods of the year and produced the habit of wasting long periods in idleness; it demanded little manuring and was accompanied by the existence of long fallows and failed to introduce any knowledge of rotational systems of agriculture. The habits of centuries cannot be changed in a short period and though holdings are now small they are still cultivated by the wasteful extensive method. There is an enormous difference between the results produced by the various cultivating castes, yet the difference between the best and the worst is nothing to the difference which could be made in the best by the introduction of scientific methods and continuous labour.

With the introduction of communications the cultivator found that, of his traditional crops, that which had the most easy sale was wheat; as a natural result he has concentrated his surplus production on this crop and a great export trade has grown up in it. In 1870 wheat was grown on about 5½ million acres; since then the area of the province has been greatly reduced, yet the average area under wheat now amounts to nearly 9 million acres in British territory alone. When the British first occupied the country there was no export of wheat, but during the decade 1886-95 the export averaged 278 thousand tons, and during the last decade, in spite of artificial restrictions, the export by railway and river of wheat and wheat flour averaged over 840 thousand tons per annum.

Whilst accurate statistics are not available, it appears to be true that the price of land has risen more than wages of labour, and that wages of labour have risen more than the price of produce which itself has risen more than the cost of production. The non-working landlord takes a fixed share of the produce and pays the land revenue; the land revenue has represented a diminishing share of the produce and hence the landowner has been taking an increasing share in produce of increasing value and gains by the general prosperity. The tenant takes a fixed share of the produce and has to bear the cost of cultivation; the former has been increasing more rapidly than the latter and therefore the tenant is also improving his position. The labourer is better off than before because his wages have risen more rapidly than the price of produce. All classes have benefited with the exception of the owner who cultivates through paid labourers and those who have bought land on borrowed capital. If these statements are true it must follow that owners desire tenants and that tenants desire tenancies; this is verified by the fact that during the last fifty years the number of tenants and the proportion of the total cultivated area which they cultivate has risen very greatly. The tenant has no security of tenure beyond that created by his scarcity value, in consequence he is not encouraged to improve the land; practically all improvements, such as the sinking of wells and planting of trees to provide timber, are carried on by owners and not by tenants. To this extent the increase in the proportion of land cultivated by tenants is an economic loss.

11. The Punjab suffers from many disadvantages tending against industrial progress. All industries collect round sources of power and at the termini of cheap lines of transport. The Punjab possesses inferior coal in the west and iron in the north, whilst oil has recently been discovered in the extreme north-west; this separation of the natural supports of industry militates against its establishment. Water-power exists in the Himalayas but at present is not made available; schemes for its utilisation are now in progress and may provide the basis on which to found industry. **Industrial and Economic.**

The Punjab is at an enormous distance from the sea; on three sides it is surrounded by sparsely populated countries which will never provide large markets for its industries, and on the fourth side it adjoins the United Provinces with similar means of production; it must therefore look for its markets either to itself or to distant countries. In so far as it provides its own wants it is assisted by its isolation which, by adding enormous freightage to the values of imported articles, creates a natural system of protection. In so far as its industries will supply distant markets, this same fact places them at a great disadvantage with similar industries elsewhere; it follows that the opening for industries in the province is limited to the production of local requirements, especially those of a bulky nature, and of commodities for export which are of small bulk in relation to their value, or which replace raw materials, which are at present exported, by partly manufactured materials of lesser bulk. As regards local requirements there is a large opening for food, clothing, building materials, and all commodities used in agriculture; such industries are already springing into existence; instances are afforded by flour mills, ice factories, tanneries, woollen mills, glass works, saw mills and cement works, but the absence of any manufactures of agricultural implements is most noticeable and is due to the primitive implements which are at present employed. Instances of industries for export are given by carpet factories and cotton ginning factories; the former produce articles of high value in relation to bulk whilst the latter lessen the bulk of raw material which is needed for export. The further manufacture of cotton into yarn or cloth does not lessen its bulk so that spinning and weaving factories would have to compete in foreign markets on even terms with old established factories elsewhere. The exports of the province consist almost entirely of raw material amongst which wheat, pulses, oilseeds, raw cotton and wood largely predominate. Wheat is scarcely more bulky and is far less perishable than flour; no flour mills, beyond those necessary to supply local requirements, could ever be successful. Manufactured wooden articles occupy more space than timber and their production must also be limited to local requirements. Ginned cotton is of less bulk than its products. None of these raw materials therefore provide an opening for export industries. Oilseeds on the other hand greatly exceed their most valuable product in bulk; if the oil were extracted locally greater profits would accrue by reason of the smaller expense of transport, and at the same time the oil cake and other bye-products would form an asset to the Punjab. The export of machinery is rendered impossible on account of its bulk in relation to value, whilst the scattered nature of the mineral resources of the Punjab almost prohibits its production even for local use; but the isolated position of the province renders it imperative that all repairs to machinery should be done within the province; at present the enormous waste due to machinery being out of action whilst spare parts are being awaited is so great that the training of skilled mechanics and erection of extensive repair shops is a crying necessity.

At the present time the demand for industrialism comes from those seeking to employ capital and from the middle classes seeking employment outside the literary professions which are over-crowded; it does not come from a desire to employ unoccupied labour; agriculture employs all the available labour and is providing that labour with increasing profits. A great extension of industrialism can only take place by withdrawing labour now employed in agriculture, and must therefore be accompanied by a decreased agricultural production or by the adoption of agricultural methods which would increase the produce per man employed.

The industrial community, though it may produce the wealth necessary to support itself, must yet have a source from which to draw its food. Its existence therefore depends either on import or on local agricultural surplus; in ancient times neither of these existed and industrialism was impossible; at the present

time there is a local agricultural surplus but large imports of food are prohibited by geographical position, hence all industrial life must depend for its food entirely on the surplus provided by agriculture. As long as the agricultural surplus is devoted to local needs, including the support of the industrial community, a bad season must create scarcity and famine which at once set back the prosperity of all classes; to avoid this there must be a surplus which is exported so that in times of scarcity the local population can be supported by reduction of exports. For a long time the production of wheat has been such that export has been possible and the local population has been kept from famine; but although of recent years war conditions have sent up wheat prices enormously, yet in 1921 the supply of wheat happened to be so short that the whole of the wheat crop was required in India with the result that the price rose to previously unknown heights. This fact shows that the export of wheat has not yet become sufficient to provide a perfectly safe margin. This being so the growth of a large industrial population, unless accompanied by greatly increased agricultural production, will be a source of danger.

The problem before the Punjab is that industrialism is required to employ capital and brains but that the necessary labour cannot be obtained except by its withdrawal from agricultural pursuits; whilst, even if it could be found, means for its support in safety would demand increased agricultural production. The solution would appear to be that the capital and brains should first of all be directed to the improvement of agriculture so that it may provide food for the industrial community without a diminution in the export of food which forms the necessary safety margin against famine and, at the same time, the improvement must be so great as to set free labour which is at present employed in agriculture. The difficulty is lessened by the consideration that in so far as the industrial labour is drawn from agriculture it will not add to the food necessities of the country.

The existence in trade of a whole series of middlemen, the functions of whom could be exercised by one man, provides another source from which industrial labour could be drawn without increasing the drain on the agricultural surplus.

Adoption of advanced intensive cultivation increases the amount of labour per unit of area, but, unless pushed very far, it also increases output per man. The solution is not to be found in crowding men on to the land or in reducing the area under cultivation but in occupying those prolonged periods in which the farmer with his present system spends in idleness; much can be done in this direction by the introduction of crops which require labour in the off-seasons; if scientific rotation and artificial manuring were introduced more autumn crops could be grown without prejudice to the spring crop; the catch-crops which are grown near towns after the spring crop has been harvested could be encouraged, and permanent improvements could be carried out in the off-seasons which would economise effort in the busy periods (for instance, the amount of daily labour which could be saved and the increase in area commanded by a well which could be caused by the construction of permanent waterproof channels are enormous). Capital could be employed in planting orange groves and fruit orchards which, after they were established, would employ less but more continuous labour than wheat cultivation, and yet would yield a greater return.

Up to a certain point the desired result of increased production accompanied with less but more continuous labour could be obtained by intensive systems of cultivation, but up to a certain point only. The most paying crops are usually of a perishable nature, their production must be limited to supplying local markets. (The production of fruit for export would have to be accompanied by the growth of a canning industry which on account of heavy freights would compete on uneven terms with established industries elsewhere).

We have seen that owing to its isolated position the Punjab can never import the bulk of its food, and moreover it must export produce which is suitable for its own food so that scarcity years may be tided over by reduction of export. Hence wheat must always remain the principal product and the principal agricultural export of the country; the production of perishable and valuable crops must be limited to supplying local markets, or must be raised by rotation with wheat and must not monopolise the land.

Though the Punjab is only just beginning to embark on centralised manufacture it has always possessed cottage industries; much attention has recently been directed to the possibility of improving and encouraging these. It is a matter of general experience that manufactures tend to drive out cottage industries; the latter lack two of the three essentials—labour, capital and organisation—and are therefore at a disadvantage. These two missing essentials, capital and organisation, can be supplied by co-operation, and in this movement lies the great hope for the success of cottage industries in this country. But in other countries where cottage industries have survived in competition with mass production it will be found that they are supplementary occupations of people engaged in other pursuits; in India they are the monopoly of particular castes and their adoption by others is largely prevented by prejudice. If the farmer and his family could be persuaded to spend their spare time in cottage industries they could largely dispense with the services of the occupational castes; much of the work of the potter, the carpenter and the weaver could be dispensed with and the members of these occupational castes would be set free for employment in centralised industries without adding to the existing demands upon the produce of the land. The day however is yet far off before the farmer will consent to consider the matter; at present the tendency is in the reverse direction and the artisan classes are adopting agriculture as a subsidiary occupation to their own. It will be noted in the chapter on occupations that the factory hands employed in carpentering, machine fitting, and even weaving comprise a remarkably small proportion of those who are carpenters, smiths and weavers by caste.

The following conclusions may be drawn from this paragraph and give some indication of the lines on which successful development may be expected; the present tendencies in development will be dealt with in the chapter on occupation.

Industrial development is hampered by the separation of raw material and power. Isolation and enormous freightage encourage manufacture for local markets, but prevent manufacture of bulky articles for export; they encourage partial manufacture of raw materials resulting in diminution of bulk.

The demand for manufactures comes from a desire to employ available capital and organising ability. Labour is not available in large quantities without being drawn from agriculture; some could be rendered available by recruitment from amongst unnecessary middlemen and from amongst the artisan classes whose present work could largely be taken up as supplementary employment by others. The food of both agricultural and industrial population must be produced in the province, and exports must largely consist of food of the same nature. To support industry agriculture must be made to yield more produce per man employed; this must be done, not by ousting wheat, but by growing valuable crops in conjunction with wheat and more especially those which provide labour in those seasons which are now spent by the farmer in idleness.

For the sake of clarity I have treated the desirable changes in agriculture as forming a condition precedent to the establishment of industrialism; but it is clear that these changes and the growth of industrialism should take place concurrently and would then be mutually beneficial.

Note.—I desire to render my acknowledgements to Mr. Calvert from whose "*Wealth and Welfare of the Punjab*" I have freely drawn in paragraphs 10 and 11.

Section II.—Area, Population and Density.

Actual, resident; normal, and natural population and the population recorded at the Census.

12. The term "population," used alone and without definition, leads to many misunderstandings and it is necessary to lay down early in this report what is meant by the expression when used in it. The simplest meaning and one which I shall call "*actual population*" is the number of persons within the boundaries of a particular place at a particular time.

For statistics which are to form the basis of administration the actual population has disadvantages; for instance a place of pilgrimage may be practically deserted throughout the year and crowded on one day; its actual population at any moment on that day is a useless item of knowledge for those administering it at other times; statistics of actual population are affected by fortuitous movements of the people which upset their normal distribution.

Going to the other extreme we can apply the term population as referring to the number of persons residing in a particular place. Here we are at once confronted with the difficulty of defining residence: but however we define it, we shall not get a satisfactory basis for statistical work; many places habitually contain a large proportion of persons who do not reside in them,—an extreme instance is afforded by the city of London; the administration of such places must provide for these non-residents who, though varying in composition, are always present. It would no doubt be possible to lay down a definition of "*resident population*" which might be of use for special purposes in relation to a small unit, but never one which would apply to a large area; for instance in the Punjab alone there are many persons who are undoubtedly residents of the Punjab but not residents of any particular district.

An indication, but certainly no definition, of what is meant by "*normal population*" is the number of persons within the boundaries of a particular place at a particular time when the conditions affecting the movements of persons in that place and the locality around it are normal. Such a normal population would include a normal number of visitors and exclude a normal number of people temporarily away from the place. Population varies both by reason of migration and by reason of births and deaths; the latter cause of variation is in constant progress and leads to a gradual permanent change, and that change is one which most certainly affects the normal population. Hence the necessity for inserting "at a particular time" in any attempted definition of normal population, a necessity which complicates the process of calculating that population. An average of actual populations, recorded at fixed intervals over a considerable period of time, might be regarded as the normal population for the middle of that period, and provided the period was of sufficient length this method would eliminate the effect of abnormal migrations; but the method assumes that the excess of births over deaths is a regular factor and altogether overlooks the fact that there are seasonal variations in normal populations. Take for instance the case of a hill station which is practically deserted in winter and crowded in summer; such an average of actual populations would not give a normal population for any given time of year.

The term "*natural population*" will be found in various subsidiary tables in this report, it relates to the population which would exist had there been no migration; that is to say it refers to the actual population diminished by the number of persons in the area dealt with who were born outside that area, and increased by the number of persons born in that area but living outside it. Like all adjustments in population statistics it is an approximation; we have no method of ascertaining the total number of emigrants to all parts of the world who are still alive; and in practice the number of those added to the actual population only includes those enumerated at recent censuses elsewhere. However as most of the Punjab emigrants go to other parts of India, where the census was held on the same date as in the Punjab, the error from this source is not great. Apart from this numerical error it is evident that the whole course of the emigrants' lives has been altered by leaving their birth-place, and in particular that their children, being born outside their district of birth, are not reckoned amongst its natural population whilst the children of immigrants are included.

It has been mentioned in the introduction that the final enumeration in connection with this census was carried out between 7 P. M. and midnight on March 18th, 1921; though a preliminary census had been held so as to simplify the work

at the last moment, all entries in the preliminary records which were not in accordance with facts in existence on the census night were deleted. The census figures are therefore, in the main, figures of the actual population on the night of the 18th March; births and deaths which occurred during the five hours the enumeration was in process may or may not have been recognised but the point is of little importance. Some parts of the province were however inaccessible at the time of the census and in these, as explained in the introduction, a census had been carried out in the previous autumn; that census too was one of actual population. Between the autumnal censuses of these inaccessible tracts and the final census in the remainder of the province a certain number of persons must have passed in and out of them; probably very few had gone into them as they are largely deserted during the cold weather even by their residents, and no visitors from outside would willingly visit them before the passes closed and so be shut off from the outside world. Such few persons, if any, who were in them in March but not at the time of the autumn census were not enumerated at all; on the other hand considerable numbers of those enumerated in the autumn had probably brought flocks of sheep and goats over the passes before they closed and spent the cold weather according to their custom as nomadic shepherds in grazing these flocks in the foot-hills and plains. These people would in the ordinary course be enumerated again in March and thus appear twice in the census records, but to prevent this all had been provided when first enumerated with a pass stating the fact, which they were directed to retain and to show to anyone attempting to enumerate them again. The people concerned are illiterate shepherds and it is far more likely that these passes are treasured amongst their possessions as mystic certificates granted for some unknown reason than that they were put to their proper use; however, here too, the numbers concerned are far too small to affect the accuracy of the general census to any appreciable degree even if double enumeration did occur.

The statistics therefore deal with the actual population on the 18th March of the main area of the two provinces, and with the actual population of small portions of the Punjab at different dates in the previous autumn, provision having been made to avoid these overlapping by an endeavour to prevent double enumeration.

The statistics in their final form deal with census units, that is with districts and states, towns and, in the Provincial Tables, with tahsils. Visitors to any of these units are shown amongst the population thereof, whilst residents who were away at the time of enumeration are not shown. People who were enumerated whilst actually travelling are shown amongst the population of the place within the boundaries of which they happened to be at that moment; but in one Table, No. III, they have been shown separately.

Reference to Statistical Tables.

13. The Imperial Tables with which this chapter is mainly concerned are the first, which shows the area, number of inhabited houses and the population of all administrative divisions, and the second, which shows the variation in population of these divisions since 1881. Table XI, which gives statistics of birth-place, should also be consulted with reference to movements of the people. The first of the Provincial Tables printed at the end of Part II of the report gives for tahsils the same details that Imperial Table I gives for districts and states. In addition seven subsidiary tables dealing with points discussed in this chapter are printed at the end of it.

The areas quoted for districts and states are those of the most recent survey conducted by the Survey of India Department, adjusted for subsequent changes in boundaries; but it should be noted that survey figures are not available for tahsils and other small units and that figures for these have been taken from the revenue records. Throughout this report survey figures will be quoted wherever available, and in other cases the less accurate revenue record figures will be given.

Area and Population.

14. The area and population of the Punjab, with its political divisions, and Delhi are given in the margin. The Punjab as a whole exceeds the British Isles in area by about one-eighth and its population amounts to nearly two-thirds that of England and Wales; the population of the British Territory included in it is comparable with that of Spain though it is contained in an area not much greater than

	Area in square miles.	Population.
Punjab	136,905	25,101,060
British Territory ..	99,846	20,685,024
Punjab States ..	37,059	4,416,036
(A)	5,820	408,019
(B)	31,239	4,008,017
Delhi	593	488,188

half of that country. The Punjab States in the aggregate exceed Ireland in area by about one-sixth and have much the same population; the recent administrative change which has been effected since the census places the principal Punjab States, with a population of just over four millions, in direct political relationship with the Government of India and leaves a number of small states with a total population of only just over four hundred thousand under the political control of the Punjab Government.

The population of the Punjab is compared with that of the largest provinces in India in the marginal table and it will be seen that the province ranks sixth in respect of total population, whilst if British Territory alone be considered it takes the fifth place on the list. Delhi with its population of 488,188 comes at the other end of the list of Indian provinces, of which it is the smallest both as regards area and population.

Province.	Population. British Territory.	States.	Total.
Madras	42,319	5,460	47,779
Bengal	46,695	897	47,592
United Provinces ..	45,376	1,135	46,511
Bihar and Orissa ..	34,002	3,960	37,962
Bombay	19,348	7,410	26,758
Punjab	20,685	4.416	25,101

Note.—000's omitted.

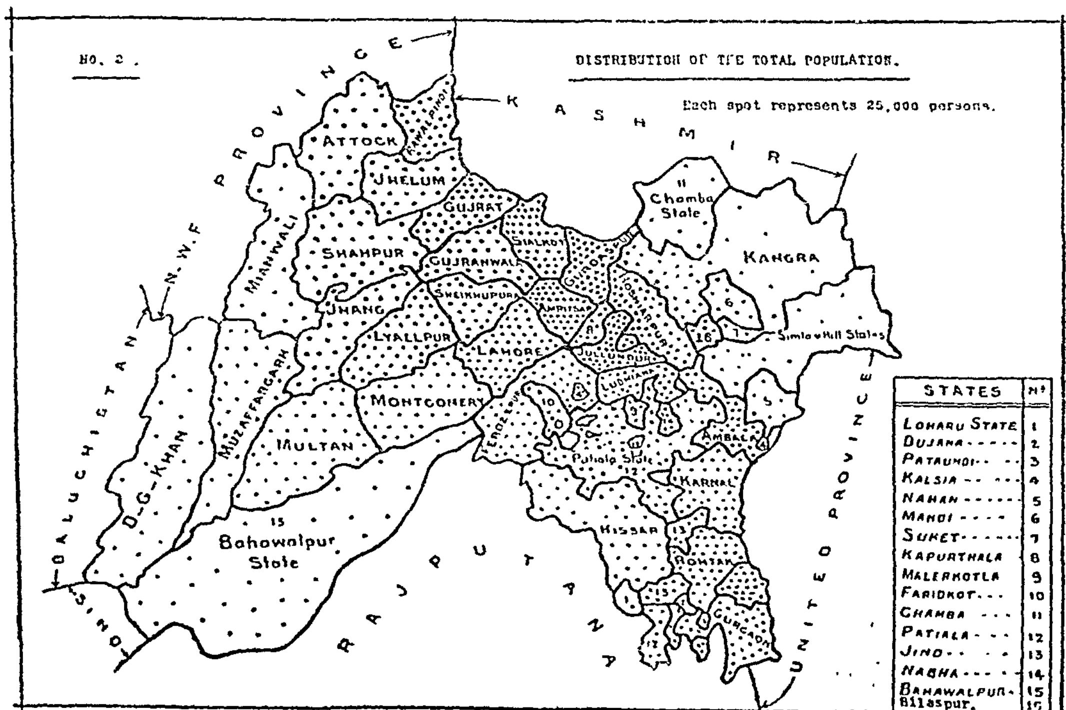
The areas and population of the four natural divisions of the Punjab are shown in the margin; they contribute 46, 7, 23 and 24 per cent. of the total population respectively.

Natural Division.	Area.	Population.
Indo-Gangetic Plain, West ..	39,296	11,446,716
Himalayan	22,050	1,737,801
Sub-Himalayan	19,478	5,838,869
North-West Dry Area ..	56,081	6,077,674

Population of Administrative Divisions.

15. Of the five divisions into which the twenty-nine districts of the Punjab are grouped for administrative purposes, the largest is Multan with an area of 31,207 square miles, whilst Lahore, with very nearly five million inhabitants, ranks first in population.

Amongst districts, Kangra with an area of 9,978 square miles is by far the most extensive; but it includes much uninhabited mountainous country and only ranks fourteenth in respect of population. Lahore District with 1,131,336 persons heads the list in respect of numbers; Simla with 45,327 persons and an area of only 101 square miles is the smallest district in both respects.

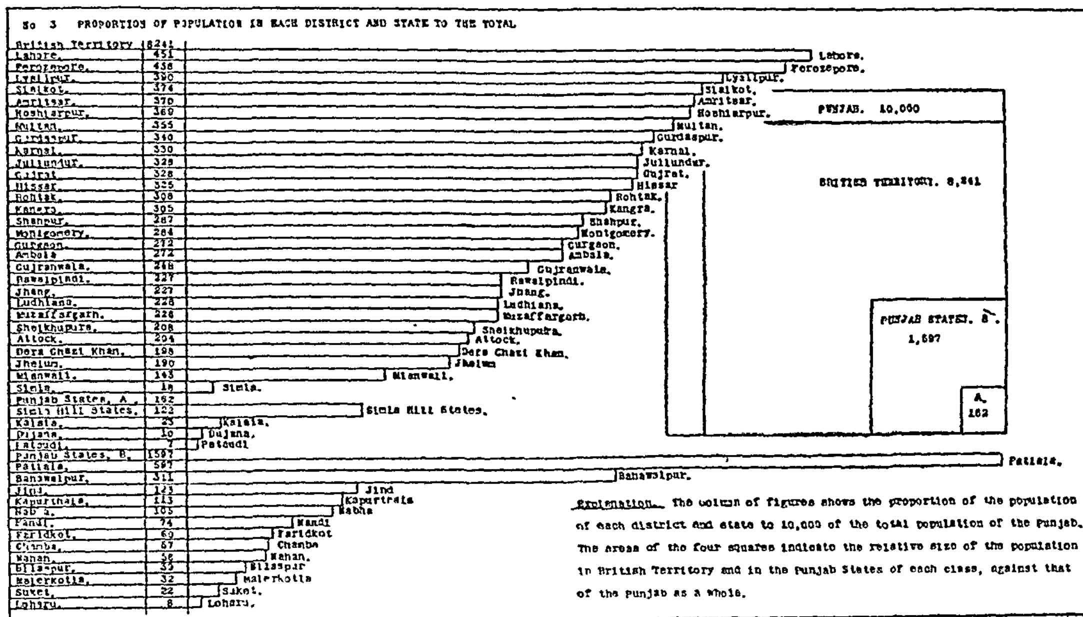


Average Population of British Districts.	
Bihar and Orissa	1,762,009
Bengal	1,667,698
Madras	1,567,370
United Provinces	945,329
Punjab	713,277
Bombay	688,990
Assam	633,853
Central Provinces	632,117
Delhi	488,188
North-West Frontier	450,268

The average size of a district is 3,444 square miles and the average population 713,277 persons; the district is the true administrative unit throughout India and the average population of districts in different provinces is compared in the margin.

The Punjab States vary enormously in size and political importance; Bahawalpur with an area of 15,003 square miles is the largest but ranks below Patiala in population, having only 781,191 persons against 1,499,793 in the latter state; at the other end of the scale come the collection of hill states in the neighbourhood of Simla, one of which is only four square miles in area whilst another only has a population of 185 persons.

The proportion of the whole population of the Punjab enumerated in each district and state is shown in diagram No. 3 in which the lengths of the strips opposite each unit represent the total population; the diagram also shows the relative population of British Territory and of the Punjab States.



76. The mean density per square mile is 183 in the Punjab and 823 in the Delhi Province; as the latter consists of a large city with a very small area of surrounding country the density of the total population is of little interest. Density.

Figures of the mean density of some leading European countries according to their latest census returns are quoted in the margin, and give a comparison which will assist European readers to visualise the extent to which the Punjab is populated. Amongst the figures quoted are those for Belgium and Norway which are respectively the most heavily and lightly populated countries in Europe. It will be seen that the Punjab is comparable with France as regards density, but it must be remembered that towns are comparatively few and far between in the province and that the general distribution of the population over the rural countryside is thicker than in that country.

Belgium	666
England and Wales	649
Germany	332
France	195
Scotland	161
Ireland	137
Spain	107
Norway	22

The density of the Punjab is very close to the mean density for the whole of India, which is 177 persons to the square mile; a curious fact is that both in India and the Punjab the density in British Territory is far heavier than that in Indian States; in India as a whole the density is 226 and 101 in British and Indian territory respectively, whilst in the Punjab the corresponding figures are 207 and 119. An examination of the figures, district by district and state by state, shows that this marked difference is not due to any peculiar characteristic of the Punjab States but is merely due to the fact that these happen to be

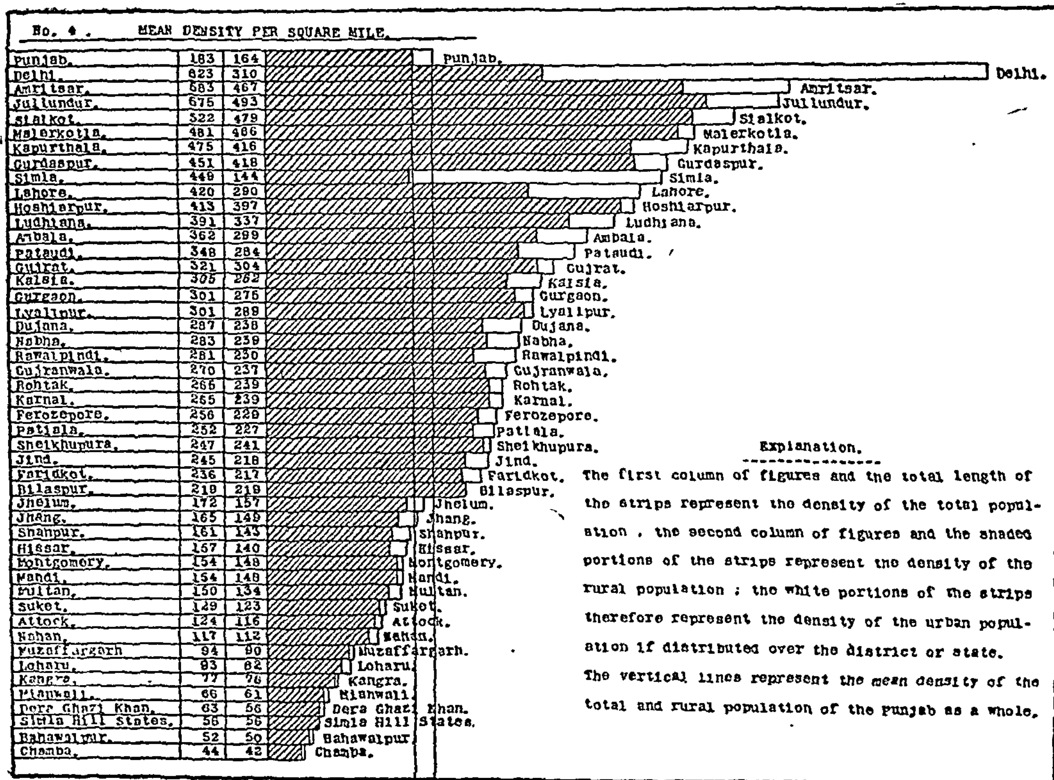
situated in the less densely populated regions; for instance the Bahawalpur State, the Simla Hill States and Chamba, which between them cover nearly two-thirds of the area occupied by the Punjab States, happen to be in the extreme south-west and north-east which are the two most sparsely populated tracts in the province.

The density is compared with that in other Provinces and States in India in the margin; it will be seen that the eastern half of India is the most densely populated and that the density decreases from north to south; though the west is less thickly populated throughout it shows the same general feature of a diminishing density from north to south. It should be noted that whilst the thickly populated United Provinces adjoin the Punjab on the east, the other three sides of the province are bounded by Rajputana, Baluchistan, the North-West Frontier Province, and Kashmir which are amongst the most deserted parts of the whole of the Indian continent.

British Territory.		*States.*	
India	226	India	101
Delhi	823	United Provinces	191
Bengal	608	Bengal	165
United Provinces	426	Punjab	119
Bihar and Orissa	409	North-West Frontier	111
Madras	297	Rajputana	76
Punjab	207	Kashmir	39
Ajmer-Merwara	183	Baluchistan	5
N.-W. F. Province	168		
Bombay	157		
Assam	143		
Central Provinces	139		

Density in Districts and States.

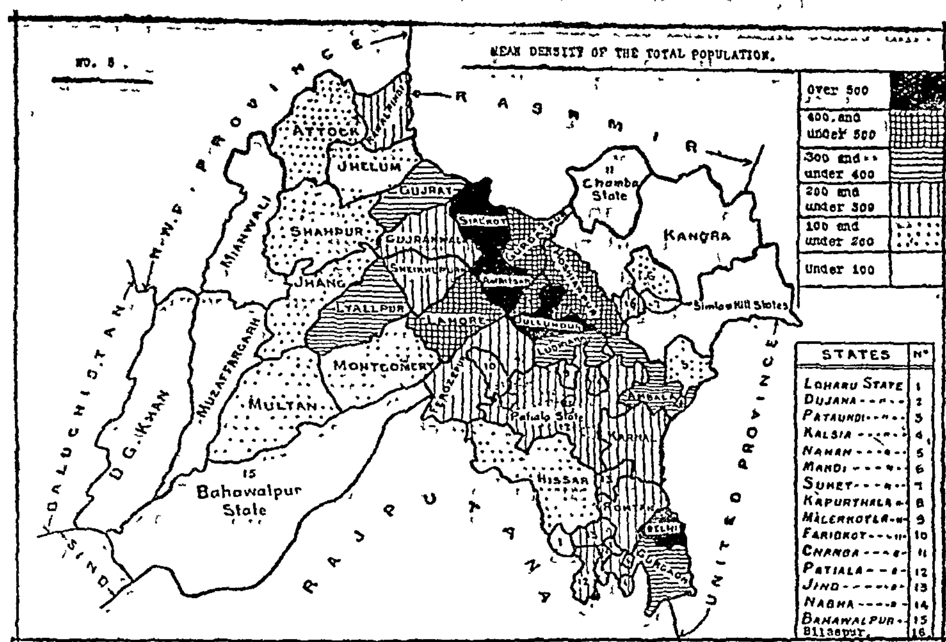
17. Diagram No. 2, though designed to show the distribution of population, also forms a rough visual guide to the density, for the proximity of the spots representing units of 25,000 persons is in direct relation to density. Diagram No. 5 however shows the same thing in a more usual way though it is inferior in that it does not show minor differences of density; the actual figures for density are given in diagram No. 4 in which districts and states have been arranged



Punjab.	183	164
Delhi.	823	310
Amritsar.	683	467
Jullundur.	675	493
Sialkot.	522	479
Malerkotla.	481	466
Kapurthala.	475	416
Gurdaspur.	451	418
Simla.	449	144
Lahore.	420	290
Hoshiarpur.	413	397
Ludhiana.	391	337
Ambala.	362	299
Pataudi.	348	284
Gujrat.	321	304
Kalsia.	305	262
Gurgaon.	301	276
Lyallpur.	301	289
Dujana.	287	238
Nabha.	283	239
Rawalpindi.	281	230
Gujranwala.	270	237
Rohtak.	266	239
Karnal.	265	239
Ferozepore.	256	229
Patiala.	252	227
Sheikhupura.	247	241
Jind.	245	218
Faridkot.	236	217
Bilaspur.	219	219
Jhelum.	172	157
Jhang.	165	149
Shahpur.	161	143
Hissar.	157	140
Montgomery.	154	148
Mandi.	154	148
Multan.	150	134
Suket.	129	123
Attock.	124	116
Nahan.	117	112
Muzaffargarh	94	90
Loharu.	93	82
Kangra.	77	76
Mianwali.	66	61
Dera Ghazi Khan.	63	56
Simla Hill States.	56	56
Bahawalpur.	52	50
Chamba.	44	42

in order according to the density of the total population. Delhi comes at the head of the list, but this is purely owing to the artificial nature of its constitution; omitting the urban area the density of its countryside is very close to that of the neighbouring tracts of Gurgaon, Rohtak and Jind which appear a long way down the list. The greatest density is found in the next ten districts and states on the list, and the map shows that all these are contiguous; with the exception of Lahore they all lie in or alongside the sub-montane tract, where rainfall is comparatively heavy and the sub-soil water level is high. The solitary exception of Lahore, which lies further from the hills, is not in reality an exception to

the generalisation that the most heavily populated tract lies at the foot of the hills, for the density of this particular district is due, like that of Delhi, to the inclusion of a large urban area in its midst.



This group of densely populated districts is situated then in one of the most fertile parts of the province; other very fertile parts depend on canal irrigation for their fertility to an extent which this does not; hence whilst this region may not now-a-days be strikingly more fertile than others, it undoubtedly has been so in the past; the denseness of its population can therefore be ascribed at once to its capability of supporting a heavy population. The next twelve districts and states on the list, with the one exception of Lyallpur, all lie in two well-defined areas; firstly the remainder of the sub-montane strip, and secondly the south-east corner of the province. At one end of the sub-montane strip come Ambala and Kalsia, at the other Gujranwala, Gujrat, and Rawalpindi. Why should not these have populations rivalling that in the first group of districts? And why should Jhelum, which lies in their midst, come so far below them again? Ambala and Kalsia, though close to the hills and possessing an abundant rainfall, are less fortunately situated as regards rivers than the tract to their west and in consequence the level of the sub-soil water is lower; irrigation from wells is difficult and there is practically no canal irrigation. Gujranwala spreads well beyond the sub-montane tract, and only a small portion of it has the characteristics of that tract; the remainder is largely irrigated from canals, parts of which are of recent construction. Jhelum and Rawalpindi lie in a part of the sub-montane tract where the country is broken by outlying hills and is much less fertile than that to the east. It is not surprising that these come well below the rest of the sub-montane tract in their ability to support a large population, and when it is noticed that Rawalpindi owes its position in the list very largely to its urban population it becomes evident that here again density bears a direct relation to agricultural resources. Gujrat is a level tract and its natural characteristics lie between those of Sialkot and Jhelum. Taking the whole strip of sub-montane country from Ambala to Rawalpindi, it would appear that density is directly dependent on agricultural conditions; so closely dependent in fact that it seems probable that the law of diminishing returns has come into operation.

Turning now to the south-east corner of the province, where the density is comparable with that in the less favoured parts of the sub-montane tract, we find Gurgaon, Dujana, Nabha, Rohtak, Karnal, Ferozepore, Patiala, Jind and Faridkot, which all lie in one block, with a very even density; these all lie in the Indo-Gangetic Plain and conditions in them are similar; Loharu and Hissar however, which lie near them, have a much less dense population; this is natural for they border on the desert country of Rajputana and have little irrigation. Part of Ferozepore resembles Hissar, but there is much canal irrigation and this

has been sufficiently long established to have made its effect felt through many generations; forty years ago the density in Ferozepore was less than that of any district in this tract except Hissar. Lahore by nature is more closely connected with this tract than with the sub-montane tract, and its rural population does not show a much greater density. This block of country is so nearly homogeneous as regards agricultural conditions, and population is spread so evenly through it, that here again we are drawn to the irresistible conclusion that pressure of population on produce must be the determining factor in the density.

Delhi	310
Lahore	290
Pataudi	284
Gurgaon	275
Karnal	239
Rohtak	239
Nabha	239
Dujana	238
Ferozepore	229
Patiala	227
Jind	218
Faridkot	217
Hissar	140
Loharu	82

By arranging all the units in this area according to density of rural population, as in the margin, several points, tending to confirm this conclusion, are brought out. Delhi's rural population lives in the immediate vicinity of a city and this always makes for intensive cultivation and heavy population. The rural area of Lahore is affected in the same way, and in addition is far more widely irrigated than any other in the tract. Pataudi and Gurgaon both carry a heavier population than the average of the tract, but in both there is a tendency for it to decline, and, as will be seen in the paragraph on the agricultural conditions of the decade, the pinch of poverty is more often felt here than elsewhere in the province. Next comes a group in which the density is practically identical and lastly come two units where it is much lower; in these two however we are faced with a rapid expansion of population in the last forty years.

The remaining units on the list attached to diagram No. 4 lie either in the western plains or in the Himalayan region; there is no possible connection between the two, though it happens that they are intermingled when arranged in order of density; these are separated and the density of their rural populations is shown in the margin. In the western plains the density varies enormously; as regards soil and climate, these plains are fairly homogeneous, but their cultivation depends almost entirely on irrigation. The units at the head of the list are copiously irrigated and have been colonised by government agency; the population in all these irrigated units is increasing by leaps and bounds and nowhere shows any sign of having reached a state of equilibrium. Here then although density has no connection with the theory of diminishing returns yet it is directly connected with agricultural conditions for the present rapid increase is entirely due to increased fertility; but as there is as yet no pressure on resources it does not vary in direct proportion to fertility. The units at the lower end of the list consist of wide stretches of dry plain in which no cultivation is possible without irrigation; in them cultivation is confined to specially favoured plots in which inundation or laborious well-irrigation renders it practicable; the population may be near the *maximum* that the present agriculture can support, but the advent of canal irrigation would immediately alter the position. Further discussion of the density in these western plains is best left to later paragraphs concerning movements of the population, for there is nothing static in the present conditions and the present density is merely a stage in a continuous movement.

Western Plains.		*Himalayan Tract.*	
Lyallpur	289	Bilaspur	219
Sheikhupura	241	Mandi	148
Jhang	149	Suket	123
Montgomery	148	Nahan	112
Shahpur	143	Kangra	76
Multan	134	Simla Hill States	56
Muzaffargarh	90	Chamba	42
Mianwali	61		
D. G. Khan	56		
Bahawalpur	50		

In the Himalayan tract the relative density of the different units is absolutely traceable to their distance from the outer edge of the hills; Bilaspur, which adjoins Hoshiarpur and nowhere penetrates far into the hills, has the greatest density; next come Mandi, Suket and Nahan which lie further in but do not run up on to the higher ranges; and lastly come Kangra, the Simla Hill States and Chamba, in which the sparseness of population is in direct ratio to the proportion of the total area which lies in and behind the main ranges.

The only district which has not been dealt with as part of a distinct tract is Attock; this, if regarded as part of the Sub-Himalayan Division, shows a remarkably low density, but it has none of the natural characteristics of that division;

it lies largely amongst arid dry hills in an inhospitable country, and forms no exception to the rule formulated below.

To sum up, density varies everywhere in accordance with agricultural resources to the exclusion of all other factors; it is so directly proportionate that the conclusion that there is pressure on these resources is irresistible; yet this same direct proportion also indicates that other factors have not yet been brought into play and hence that the pressure on resources is not extreme, for in that case industrialism would have been forced into existence and would have led to variations in density independent of agriculture. An exception to the rule exists in the irrigated portions of the western plain where population is rapidly increasing and as yet has received no check by its pressure on resources; whilst the beginnings of more acute pressure are observable in the extreme east of the province where there is a steady decline in population in Ambala and Gurgaon, and a diminishing rate of increase in other districts.

Density of Rural Population and its relation to Agricultural Conditions.

18. In discussing the distribution of the total population in the preceding paragraph it has been impossible to avoid some reference to the incidence of the rural part of the population; in this paragraph the distribution of the rural population will be discussed in greater detail with a view to discovering its relation to agricultural conditions. The discussion will be limited to British territory so as to avoid basing arguments on the incomplete and, in some cases, unreliable agricultural statistics which are all that are available for the states. Suffice it to say that an examination of such figures as are available reveals no peculiar points in connection with any of the states, all of which appear to resemble adjoining British districts in regard to the matters which will come under discussion.

In any tract which is entirely self-supporting and has no imports and exports the presence of a town would create a drain on the produce raised and thus lessen the amount available for the rural population; in such tracts it would be natural to discuss the relation between total population and agricultural conditions. But the Punjab is not such a tract; its communications are sufficient to ensure that the needs of a town are ultimately met from produce raised in distant parts of the country; here the presence of a town affords a market for the produce of the vicinity and increases the value of agricultural lands by encouraging intensive cultivation which necessitates a denser agricultural population. Of two equal areas of land of equal quality that which is nearer a town is more productive; its owner adopts more intensive systems of farming so as to supply the town with produce of high value and obtains part of his own food by purchase, and in doing this he benefits because the money value of that food is raised on a smaller area than would be required to raise the food itself. As a plot of land will maintain its owner in greater affluence if it be situated near a town, it follows that it will support a larger rural population than a similar area in the depths of the country.

Hence before we can examine the relationship between density and cultivation, we must exclude the urban part of the population; and, even after we have done this, we may expect a greater density of the remaining rural population in such districts as contain large urban communities.

It may be argued that, though agricultural land in the neighbourhood of a town demands a dense *agricultural* population, it may not support such a dense *rural* population as land elsewhere because the agricultural community is able to supply its needs from the town and is therefore not allied with such a large supplementary population of artisans and petty traders. This argument is not applicable to the Punjab where it is well known that villages in the neighbourhood of towns have just as many menials, artisans and petty shopkeepers as those elsewhere.

If we omit the urban population from our statistics the density in the British territory of the Punjab drops at once from 207 to 185 persons per square mile. In England and Wales, by omitting the population of all urban areas with a population of five thousand or more persons, the density drops from 649 to 172 persons per square mile. This fact assists us in visualising the distribution of rural population over the Punjab countryside, but it forms the basis of no comparison for the rural population of England is not primarily dependent on the produce of the tracts in which it lives.

Diagram No. 5, in the previous paragraph, shows the density of the rural population as well as of the total population, but the former is in an inconvenient form and the figures are repeated in the margin with the districts arranged according to the density of the rural population.

	Density of rural population in British Territory per square mile.	Percentage of net cultivated to total area, 1921.
Punjab	185	40
Jullundur	493	70
Sialkot	479	70
Amritsar	467	70
Gurdaspur	418	64
Hoshiarpur	397	48
Ludhiana	337	75
Delhi	310	56
Gujrat	304	54
Ambala	299	57
Lahore	290	61
Lyallpur	289	69
Gurgaon	275	68
Sheikhupura	241	48
Rohtak	239	60
Karnal	239	49
Gujranwala	237	53
Rawalpindi	230	40
Ferozepore	229	77
Jhelum	157	35
Jhang	149	31
Montgomery	148	34
Simla	144	15
Shahpur	143	39
Hissar	140	71
Multan	134	30
Attock	116	34
Muzaffargarh	90	16
Dera Ghazi Khan ..	79	16
Kangra	76	8
Mianwali	61	17

There is practically no manufacture outside the towns and there is very little room for error in assuming that the rural population is entirely supported by local agriculture; by this I do not mean that its food, clothes and other requirements are produced locally, but that its only primary source of wealth is the local agricultural produce and all its requirements are satisfied by that wealth.

A comparison of the two columns of figures shows at once that, with very few exceptions, density follows *extent* of cultivation; and, further, that variations in density are greater than variations in the extent of cultivation. We can therefore lay down the two following principles as being of general, though not universal, application:—*density of rural population primarily depends on the proportion of land which is cultivated. and density increases at a greater rate than that proportion.* The latter principle admits of two explanations; it may be due to the Malthusian theory of diminishing returns which postulates that an increase in population leads to a disproportionately small increase in resources and therefore leads to a reduced standard of living; or, it may be due to the fact that the actual cultivation in tracts which are capable of wide cultivation is superior in quality as well as quantity.

Probably both explanations are partly true: for instance, there can be no doubt that the cultivation in Jullundur, in addition to being more thickly distributed, is very far superior in quality to that of Dera Ghazi Khan; yet it is possible that the extension of cultivation in the former district has been pushed to such limits that the poorest land under cultivation is inferior to land which may be left uncultivated in the latter.

More detailed comparison of the two columns of figures reveals the following exceptions to the general rule:—Hoshiarpur, Sheikhupura, Simla and Kangra are far more densely populated than other districts with similar proportions of cultivation, and on the other hand Ludhiana, Ferozepore and Hissar vary in the opposite direction.

In Sheikhupura there has been much colonisation in the last few years and the cultivated area is in the process of very rapid extension.

Simla and Kangra lie in the Himalayan tract; they and the states which adjoin them all have large areas of waste which is not unproductive and numbers of people earn or supplement their income by collecting wood and forest produce or by grazing herds and flocks in these wastes. In this tract the underlying assumption that the rural population is dependent on local agriculture is incorrect. To a far less degree the same remarks apply to Hoshiarpur. In Simla a large proportion of the inhabitants make a living by supplying the transport necessary to the existence of the summer capital in their neighbourhood: and in both Kangra and Hoshiarpur an exceptionally large number of persons earn their living in the army and in domestic service throughout the length and breadth of the province.

Ferozepore and Hissar lie on the borders of Rajputana and much of their land is of poor sandy quality in which the cultivated area is devoted to raising crops of low value; the sparseness of their population may be ascribed in the main

to the inferiority of their cultivation, but at the same time it must be noted that the population of these two districts (especially that of Ferozepore) has been increasing since 1881 at a far greater rate than in any other districts of the Eastern Punjab. We may conclude that in these two districts, whilst the quality of the soil precludes a dense population, the present density is exceptionally light and leaves room for future increase. The case of Ludhiana does not admit of such obvious explanation and must be left for discussion till a further stage has been reached in the analysis of the statistics.

Having established these principles, the next step is obviously to exclude the waste and to calculate the incidence of the rural population on the *cultivation*. This has been done in two ways and the results are shown in the margin; in the first the incidence is calculated on the area of land under cultivation, in the second upon the area of matured crops. The basis of the two sets of figures are given by the net cultivated area of 1921 and the average of the matured areas recorded in the nine years 1912-13 to 1920-21; the latter period was chosen as it eliminates the complication due to the changes in the Delhi boundaries which took place before 1912-13; unfortunately separate statistics for matured areas in Delhi, Gujranwala and Sheikhupura were not available and these districts have been omitted from the second set of figures. The first thing to notice is that the first set of figures gives the incidence on cultivated area without making any allowance for its quality, and hence affords data from which to discover the extent to which density on cultivation varies with the quality of that cultivation.

INCIDENCE OF THE RURAL POPULATION PER SQUARE MILE ON

Net cultivated area of 1921.		Average area of matured crops.	
Punjab	460	Punjab	513
Kangra	984	Simla	928
Simla	972	Hoshiarpur	805
Hoshiarpur	831	Kangra	749
Jullundur	701	Gujrat	664
Sialkot	682	Sialkot	648
Amritsar	670	Jullundur	636
Gurdaspur	652	Rawalpindi	633
Rawalpindi	578	Gurdaspur	617
Muzaffargarh	568	Montgomery	583
Gujrat	559	Amritsar	581
Delhi	552	Muzaffargarh	562
Ambala	522	Karnal	556
Sheikhupura	499	Multan	546
Dera Ghazi Khan	490	Ambala	538
Karnal	486	Gurgaon	523
Jhang	482	Jhelum	507
Lahore	472	Rohtak	496
Ludhiana	448	Jhang	476
Gujranwala	443	Ludhiana	468
Jhelum	443	Dera Ghazi Khan	462
Multan	442	Lahore	458
Montgomery	430	Attock	437
Lyallpur	417	Mianwali	412
Gurgaon	407	Lyallpur	406
Rohtak	398	Shahpur	406
Shahpur	365	Ferozepore	370
Mianwali	361	Hissar	306
Attock	340		
Ferozepore	297		
Hissar	196		

Only one feature of the quality of agricultural land—namely the area of matured crops it produces—is capable of quantitative measurement; the second set of figures shows the incidence after this has been eliminated. If we had reliable figures for yields for each district and could combine them so as to get average yields for all crops, we could then carry the process a step further and by calculating the incidence of rural population on actual produce we should see at once the extent to which pressure on subsistence is present in each district; failing this the incidence on matured area gives some indication of that pressure though it is affected by the differences in yields for which allowance must be made before any conclusions can be drawn.

I shall now examine the first column of figures in an attempt to trace if any connection exists between incidence of rural population and the quality of agricultural land. It has already been stated that cultivation in the Punjab is affected more by rainfall and irrigation than by difference in soil, and I shall endeavour to trace the connection between density and these factors, first, by considering *rainfall* in districts where the irrigation is similar and, second, by considering *irrigation* in districts where the rainfall is similar.

Turning to the statistics for irrigation given in paragraph 8 it is seen that, out of the twenty-eight districts there mentioned, twelve have less than 28 per cent. of their crops irrigated, seven have between 36 and 54 per cent. and nine have over 70 per cent. irrigated.

Taking the first group of twelve districts, which have little irrigation, and arranging them in order of incidence on cultivated area, we get the figures reproduced in the margin. With the solitary exception of Hissar the incidence varies throughout according to the rainfall, and the extent of irrigation appears to have no appreciable effect. The exceptional case of Hissar has already been explained and these figures support the explanation given.

Districts with less than 28 per cent. irrigated.	Incidence.	Rainfall.	Irrigation.
Kangra	984	74	63
Simla	972	63	0
Hoshiarpur	831	35	11
Gurdaspur	652	34	28
Rawalpindi	538	32	2
Ambala	522	32	6
Jhelum	443	26	5
Gurgaon	407	25	17
Rohtak	398	20	27
Attock	340	20	9
Mianwali	301	12	12
Hissar	196	16	16

We can now enunciate another principle ;—*in tracts with less than one-third of the cultivation irrigated, the incidence of population on cultivated area is primarily determined by the rainfall.*

Treating the next group of seven districts, with moderate irrigation facilities, in the same way we get the marginal table which, though it is not so strikingly convincing as that which preceded it, will yet be found to support the following principle :—*where irrigation extends to more than one-third of the cultivation, but not less than one-half, the incidence on cultivation depends primarily on the extent of irrigation but is also affected by great differences in rainfall.* Here again an exception to a general rule is afforded by Ferozepore, the light density in which has already been explained.

Districts with from 30 to 54 per cent. irrigated.	Incidence.	Rainfall.	Irrigation.	Well irrigation.
Jullundur	701	27	51	51
Sialkot	682	32	53	48
Gujrat	569	26	36	15
D. G. Khan	490	6	43	11
Karnal	486	30	36	14
Ludhiana	448	26	37	28
Ferozepore	297	20	46	14

The remaining districts, which have more than 70 per cent. of their matured crops irrigated, when arranged in the same way, show that, *where irrigation is widely extended, the rainfall becomes a negligible factor in regard to its effect on density.* The figures also indicate that the extent of well irrigation is a more important factor than the extent of irrigation from canals. The significance of the figures is somewhat obscured by the fact that Lahore, Montgomery, Lyallpur and Shahpur are all districts in which population has increased by over 10 per cent. in the last decade and is obviously not in a static condition, so that in them density cannot be expected to be fully influenced by agricultural conditions. In fact the figures indicate that Lyallpur and Shahpur are lightly populated in comparison with other districts, and that in them further large increases may reasonably be anticipated.

Districts with over 70 per cent. irrigated.	Incidence.	Rainfall.	Canal irrigation.	Well irrigation.
Amritsar	670	24	40	30
Muzaffargarh ..	568	6	53	24
Jhang	482	10	58	28
Lahore	472	18	50	22
Gujranwala	443	23	55	21
Multan	442	7	73	14
Montgomery ..	430	10	64	23
Lyallpur	417	13	97	1
Shahpur	365	15	64	11

By grouping districts according to rainfall and examining the effect of rainfall and irrigation on density of population within these groups, though we cover much the same ground and arrive at many of the same conclusions we are able to throw a little further light on the subject. This converse process is shown in the margin, and tends to establish the following principles :—*where the rainfall exceeds 30 inches per annum it outweighs other factors in determining density of population over cultivation ; where it lies between 20 and 30 inches it is still the main factor, but very large differences in the extent of irrigation also have a considerable effect ; where it is less than 20 inches it ceases to have any appreciable effect.*

	Incidence.	Irrigation.	Rainfall.
Rainfall over 30 inches—			
Kangra	984	20	74
Simla	972	0	63
Hoshiarpur	931	11	35
Sialkot	682	53	32
Gurdaspur	652	28	34
Rawalpindi	578	2	32
Ambala	522	6	32
Karnal	486	36	30
Rainfall between 20 and 30 inches—			
Jullundur	701	54	27
Amritsar	670	70	24
Gujrat	559	36	26
Delhi	552	23	28
Ludhiana	448	37	26
Gujranwala	443	76	23
Jhelum	443	5	26
Gurgaon	407	17	25
Rohtak	398	27	20
Attock	340	9	20
Ferozepore	297	46	20
Rainfall less than 20 inches—			
Muzaffargarh	568	77	6
Sheikhupura	499	76	15
Dera Ghazi Khan ..	490	43	6
Jhang	482	86	10
Lahore	472	78	18
Multan	442	87	7
Montgomery	430	87	10
Lyallpur	417	98	13
Shahpur	365	75	15
Mianwali	361	12	12
Hissar	196	16	16

We can now examine the figures for incidence on matured areas which, as already explained, eliminate part of the variations due to differences in quality of land, and tend to reflect pressure on resources, this tendency being partially obscured by the fact that differences in yields have not been eliminated. The list of districts is headed by Simla—where there are 928 members of the rural population to every square mile of matured area, which allows just over two-thirds of an acre of matured crops per head— and runs down to Hissar in which there is an average of just over two acres of matured crops to each person. It includes districts in which conditions are obviously exceptional, and it will simplify the examination to exclude these at once. We have already seen that Simla, Hoshiarpur and Kangra form such exceptions, for in them the rural community has extensive resources in addition to those afforded by agriculture whilst even so the inhabitants resort to outside service in very large numbers indicating that the present resources of the districts are insufficient to support the population ; a view which is supported by the fact that in Kangra and Hoshiarpur the rural population has only increased by five per cent. in forty years whilst in Simla it has declined by four per cent. in the same period.

Montgomery, too, is a district that must be removed from the list because it owes its position in it to fortuitous circumstances ; the matured area based on an average of nine past years gives very misleading results in a district where large areas have been irrigated, colonised and brought under cultivation in the last few years. On general grounds it is probable that this district is very far from being in the congested state suggested by the figures ; like other newly colonised tracts the areas allotted are more than sufficient to support the colonists and for many years the newly broken soil will probably yield increasing returns and enable the population to expand rapidly without detriment to the general standards of prosperity and comfort.

At the lower end of the list Lahore, Lyallpur, Shahpur and Ferozepore are all districts in which population has been increasing very rapidly during the last decade, whilst in Hissar population has been increasing steadily since 1881. This fact, taken together with their low position on the list, indicates very clearly that there is little pressure on resources and that further increase in population may be anticipated without anxiety. At the same time it must be noted that the very low figures for Ferozepore and Hissar are partly due to the presence of poor soil and that the capacity for increase is not nearly so large as the bare figures indicate ; this is particularly true in Hissar where absence of irrigation and a light rainfall render the crops peculiarly liable to disastrous failure ; under present economic conditions a district where the crops fluctuate excessively cannot support nearly

so many people as a district in which the crops maintain the same average without much variation from year to year.

By the omission of the nine districts mentioned the list is reduced to a form in which it is far more suitable for comparative purposes; it now includes districts in which the incidence lies between 664 and 412 persons to the square mile; or in which the average matured area per head varies between 0·96 and 1·55 acres, a difference which could easily be obliterated by differences in yields; this being so it is obviously wrong to jump to the conclusion that there is greater pressure on agricultural resources in districts at the head of the list than in those at the bottom; we have, in fact, come to the point where figures fail us and quantitative analysis must yield to general considerations based on local knowledge.

The list showing incidence of rural population on matured area, in its reduced form, together with a few leading statistics for each district is reproduced below—

	Incidence of rural population on matured area.	Rainfall in inches.	Percentage of canal irrigation.	Percentage of well irrigation.	Percentage of area under wheat.	Percentage of area under pulses.	Gain *per mille* by migration inside the Province.	Increase per cent. in population, 1911—1921.	Increase per cent. in population, 1881—1921.
Gujrat	664	26	21	15	40	8	—48	5	13
Sialkot	648	32	5	48	43	2	—176	1	0
Jullundur	636	27	0	54	34	11	—136	2	4
Rawalpindi	633	32	0	2	42	1	24	4	21
Gurdaspur	617	34	11	17	35	5	—93	2	3
Amritsar	581	24	40	30	33	10	—113	5	4
Muzaffargarh	562	6	53	24	45	7	—4	0	29
Karnal	556	30	22	14	20	18	2	3	—3
Multan	546	7	73	14	39	4	63	9	60
Ambala	538	32	0	6	27	8	—59	—1	—8
Gurgaon	523	25	6	11	7	17	—33	—7	—10
Jhelum	507	26	0	5	49	4	—68	—7	—3
Rohtak	496	20	19	8	10	20	—5	8	4
Jhang	476	10	58	28	45	5	—112	9	46
Ludhiana	468	26	9	28	27	20	—34	10	—8
Dera Ghazi Khan ..	462	6	32	11	32	4	—19	—7	28
Attock	437	20	1	8	48	8	—15	—1	15
Mianwali	412	12	5	7	35	28	—35	5	37

Probably Jullundur has the richest cultivation of any district in the province; it possesses an ample rainfall, excellent soil, very extended well irrigation, splendid marketing facilities, and an agricultural population largely composed of castes which supply the best and most intensive farmers known in the Punjab. Sialkot resembles it very closely, but does not have quite such good marketing facilities and raises a larger area of wheat and a smaller area of crops of "market garden" variety.

Gurdaspur and Amritsar are situated in the same fertile tract; the former is differentiated by a heavier rainfall and less irrigation, the latter by the existence of much canal irrigation which is unfortunately accompanied by water-logging; their slight inferiority in the way of natural advantages is certainly more than counterbalanced by the lesser incidence of their rural population.

These four districts stand apart from the rest of those on the list by reason of the excellence of their agricultural conditions, and their position near the head of the list does not necessarily indicate undue pressure on resources, though it leads us to look for indications of its existence in other directions; evidence of its existence is afforded by the fact that population has remained practically stationary for over forty years, and that at the present time there is a marked balance of emigration over immigration. As regards natural advantages these districts may perhaps be graded in the order Jullundur, Sialkot, Amritsar, Gurdaspur which is not the same as the order in which they appear in the list and we may conclude that the margin of surplus is less in Sialkot than Jullundur, and less in Gurdaspur than Amritsar.

The natural advantages in Gujrat are certainly less than in the four districts mentioned above, yet its rural population has a smaller relative area of

crops ; there can be little doubt that pressure of population is very severe in this district. The recent opening of the Upper Jhelum Canal has improved the conditions and will continue to do so ; until the district has had time to settle down under the new conditions it is not possible to estimate their effect. It may safely be asserted that Gujrat has become dangerously congested, but that the situation may be saved by the new canal ; even with the amelioration in conditions which will be caused by the new irrigation it is unlikely that the district will support a considerably greater population than that already in existence.

In the Sub-Himalayan tract and west of the foregoing districts lie Jhelum, Rawalpindi and Attock : in respect of irrigation and composition of their crops these three districts are remarkably similar and all are characterised by the presence of low hills containing much unfertile land. In respect of population they are remarkably dissimilar, yet Rawalpindi with the highest incidence shows a tendency to increase whilst the others do not. Rainfall amounts to 32 inches in Rawalpindi, 26 inches in Jhelum and 20 inches in Attock ; the forests of Rawalpindi form an asset of the rural population in addition to its crops ; easily accessible irrigated lands in Shahpur and in the colonies to the south have attracted many emigrants from Jhelum for several generations past. These facts help to explain the large differences in density but it is still impossible to avoid the conclusion that Rawalpindi is far more congested than the province as a whole, that Attock supports far fewer people than it is capable of doing, and that the declining population of Jhelum is not caused by pressure on resources.

Proceeding down the list we come to Muzaffargarh which adjoins Jhang and Multan and resembles them in many of its agricultural aspects. The incidence on matured crops is 562, whilst it is 546 in Multan and only 476 in Jhang. These three districts have low rainfall and copious irrigation ; in all there has been a very great increase in population since 1881, and in all that increase has followed extensions of irrigation. The extensions in Muzaffargarh are of less recent date than in the others, and it has had more time for population to adjust itself to existing conditions ; in it a definite check has recently occurred in the increase of the inhabitants. In Multan and Jhang the increase has been greater and is still continuing at a rapid rate ; a very slight check has occurred in Jhang owing to the fact that attractive employment in new colonies has drawn away some of the people who, though quite well off in their own districts, saw chance of improving their position by migration. We may conclude that Muzaffargarh is nearing the point when production limits population, though there is certainly no indication that pressure on resources is unduly heavy ; and also that Multan and Jhang have not reached that point ; everything points to the conclusion that Multan and Jhang are lightly populated and may expect to see a further rapid increase.

Ludhiana, Ambala, Karnal, Rohtak and Gurgaon all lie in the eastern plains and have many characteristics in common ; it will be convenient to discuss them together. The presence of light sandy soil is reflected by the statistics quoted which show that the proportion of wheat is far lower than anywhere else in the province ; it is replaced by pulses and inferior crops to which the soil is more suited ; this inferiority gets more marked from north to south which is the order in which the districts have been mentioned. The figures for incidence on crops vary from 556 in Karnal to 468 in Ludhiana ; they are too near those for the rich tracts round Jullundur to reflect the enormous difference in the quality of crops ; they are at much the same pitch as in the extensive tracts of rich irrigation to the west which are undoubtedly fit to support a greater density than these eastern plains. In short, they indicate that the whole of this eastern tract is overcrowded ; which indication is supported by the facts that except in Karnal and Rohtak there is great loss of population by migration to other parts of the province, and that except in Rohtak there has been an universal decline in population since 1881.

In these districts agricultural and political conditions have remained unchanged for a great many years ; here, if anywhere in the province, population might be expected to have adjusted itself to conditions. In one way this expectation is realised for in the tract as a whole population appears to have approached nearer the limit of resources than elsewhere in the province ; in another way the

expectation is completely falsified, for the variation in density as between the districts shows no relationship with the variations in their resources. One explanation accounts for both these points;—the inhabitants are Hindus of a less enterprising nature than the Sikhs who live east of them; affection for their ancestral lands, strong throughout the province, is perhaps strongest here; they have submitted to straitened conditions without an effort to escape from them by seeking permanent employment elsewhere, and though there is emigration it is mainly local; the only extensive movements to Lyallpur and other canal colonies have been from Ambala and Ludhiana. This one feature accounts for the tract having become overcrowded as a whole, and also accounts for the overcrowding being markedly different from district to district.

It has already been indicated that the order Ludhiana, Ambala, Karnal, Rohtak, Gurgaon, is one of diminishing quality of the soil; Ambala has the heaviest rainfall but practically no irrigation; Ludhiana and Karnal with rainfalls not far below that of Ambala have 37 and 36 per cent. of their crops under irrigation, but the former district is more favoured than the latter by reason of the greater extent of well irrigation; in respect of natural advantages Ludhiana is better off than Karnal which is again better off than Ambala. Gurgaon and Rohtak have less rain and less irrigation than either Ludhiana or Karnal, and both grow much less wheat; the heavier rainfall in Gurgaon is offset by more extensive irrigation in Rohtak; on the whole there is little to choose between the two though probably advantages in the soil give Rohtak a stronger position than Gurgaon. It is difficult to know how to place Ambala with respect to these two; it excels in soil and climate but has practically no irrigation.

Ludhiana ..	468
Karnal ..	556
Ambala ..	538
Rohtak ..	496
Gurgaon ..	523

Arranging these five districts in the order of their natural advantages, or, in other words, in the order of their capacity to support population, and noting the actual incidence of population on crops in each, we get the surprising result shown in the margin. Ludhiana with the greatest capacity supports the least people, whilst throughout there is no relation between the burden of population and the capacity to bear it. We may conclude that the pressure on resources is heaviest in Gurgaon and not much less severe in Ambala and Karnal, whilst in Ludhiana it is very much less than in any other of the five districts. This conclusion is supported by the fact that the population of Gurgaon and Ambala has rapidly fallen off since 1881 to an extent which is not accounted for by migration. The decrease in the same period in Ludhiana does not affect the conclusion as it all occurred in one decade and was due to epidemics of plague. Loss by migration is also heaviest in Ambala, Gurgaon and Ludhiana; in Ludhiana the inference raised by the loss by migration is partly nullified by the fact that the inhabitants are less conservative than in the other four districts, and that a greater proportion of them received grants of land during the colonisation of Lyallpur.

The only districts not yet discussed are Dera Ghazi Khan and Mianwali which appear at the end of the list; Mianwali, with little rain and scarcely any irrigation, appears to be in the position on the list which its natural disadvantages render appropriate, and the figures give no indication as to whether there is or is not any considerable pressure on resources. Dera Ghazi Khan also appears to occupy a position warranted by its circumstances, though a comparison with the much more heavily populated districts of Multan and Muzaffargarh—than which it has much less irrigation—tends to show that there is room for expansion.

The principles, and the particular local points, which this lengthy paragraph tends to establish, may be summed up as follows:—

Towns may create a drain on the agricultural resources of the province but within districts their existence tends to enable the countryside to support a heavier rural population.

Density of rural population depends primarily on the proportion of the land cultivated, and secondly on rainfall and irrigation.

Where rainfall is under twenty inches per annum, density on cultivation depends entirely on irrigation; where it is over thirty inches, entirely on rainfall.

Conversely where less than one-third of the cultivation is irrigated, the incidence of population on cultivation depends on rainfall; where over two-thirds is irrigated, irrigation is the determining factor.

Quality of soil only finds third place in the factors affecting density, and is practically without effect except in the south-east of the province.

In general the existing distribution of population is in very close agreement with these principles; so close that as a general proposition it may be asserted that the population throughout the province has approached sufficiently near the limit of resources to render that limit operative in determining density.

At the same time minor differences of distribution occur which are not in accordance with the present extent of resources, and these minor differences indicate that the various districts may be grouped as follows :—

(1) Districts where there is severe pressure on resources—
Kangra, Hoshiarpur, Simla, Gurgaon, Ambala and Gujrat.

(2) Districts where the pressure is felt but in a less degree—
Karnal, Rohtak, Rawalpindi, Sialkot, Jullundur, Amritsar, Gurdaspur, Ludhiana and, probably, Gujranwala and Delhi.

(3) Districts where the population is suitable to the resources available—
Mianwali, Jhelum, Muzaffargarh and, probably, Dera Ghazi Khan.

(4) Districts where resources could support a greater population without detriment to its welfare—
Ferozepore, Hissar and Attock.

(5) Districts which are under-populated—
Montgomery, Lahore, Lyallpur, Shahpur, Multan, Jhang and, probably, Sheikhupura.

It must be noted that this grouping is arranged for *present* conditions, indicating the position at the moment; it does not allow for future changes in conditions, such as probable extensions of irrigation and cultivation. It is difficult to assign positions to Gujranwala and Sheikhupura on account of the absence of separate statistics and they have been placed in groups containing adjoining and similar districts.

Section III.—Variation in Population at Previous Censuses

19. The Punjab stands at the ancient gateway of India and through it have passed the successive swarms of immigrants and invaders who were the progenitors of by far the greater part of the present population of the Indian continent. The Aryans, the Scythians, the Greek armies under Alexander, and the long succession of Mohammadan raiders and conquerors have all swept across its plains and have all left their mark on the province and the great country beyond it. History.

In it the Hindu religion had its birth and in it the most ancient sacred books of that faith were written; one of the greatest characters in the history of Buddhism was born in the province; but the Buddhist faith has practically disappeared, whilst the centres of Hindu learning and culture have been driven eastwards before the Musalman invaders who left behind many settlers of their faith and forced that faith upon a large number of the earlier inhabitants. The Punjab also is the home of the Sikh religion, which, starting as a peaceable revolt against the complexities and Brahmanical subjection of Hinduism, developed under Mohammadan oppression into a military and political organisation. Musalmans now compose 51 per cent. of the population whilst Hindus have declined in numbers till they only include 35 per cent. and from amongst them have arisen the Sikhs of whom 12 per cent. of the population is composed.

Throughout its history the Punjab had been the scene of constant violence and bloodshed which culminated in the 18th century in an orgy of rapine and wild disorder; early in that century the Sikhs, with their rising military power, raided and ravaged the eastern parts of the province and extended their exactions to the central and northern tracts; their depredations were followed by the invasion of Nadir Shah, the Persian, who swept through the Punjab destroying and laying waste, and the desolation was completed by a series of great famines which occurred in the middle of the century. Thereafter the country was the scene of constant invasions by the Duranis from the west and of struggles for supremacy between the Sikhs and Mahrattas; in the middle of fifty years of bloodshed and disorder the countryside was again desolated by a terrible famine in 1783.

At the beginning of the next century some measure of peace was restored owing to the rise in supremacy of the great Sikh leader Maharaja Ranjit Singh, whilst in 1803 the British became masters of the territory now roughly included

in the districts of Delhi, Gurgaon, Hissar, Rohtak and Karnal and also extended their protection to the States in the eastern part of the Province. Famine and fever however waged constant warfare against the population during this comparatively settled period. After Ranjit Singh's death a state of anarchy arose which constantly threatened the peace of the British borders and led to the first Sikh war which ended in March 1846 and resulted in the occupation of Lahore and the cession of the Jullundur Doab to the British; two years later insurrections in the south-west led to the second Sikh war and the establishment of British rule throughout the province.

The country was suffering the natural effects of centuries of warfare and violence: a harrowing picture of the conditions which prevailed occupies several pages of Mr. Ibbetson's Census Report of 1881. The south-eastern districts of the province, ravaged in turn by Sikh and Mahratta, were desolated; each group of villages was at deadly enmity with its neighbours, and much of the countryside was practically a desert inhabited only by a few tribes of marauding nomads. The hill country, which had long been suffering under local strife, had been overrun by the Gurkhas before the Sikhs gained supremacy: the desolation caused by the Gurkhas was little relieved by peace under the Sikh Government which forcibly collected a revenue which impoverished the people and left them scarcely sufficient for the barest existence. In the west the Sikh rule had had least hold and the country was in a violent state of disorder; might was right, local leaders were in constant warfare and every second or third year the country was invaded by Sikh armies who laid it waste with all the excesses natural when wild and uncultured men are let loose amongst their hereditary religious enemies.

In the centre and south-west the Sikh rule was stronger and more equitable but, though some approach to government was maintained, the main object was to wring from the cultivators the last farthing which could be extracted without compelling them to abandon their fields. The Sikhs promoted and extended cultivation as far as possible under a system which held forth the minimum of inducement to the cultivator, but they respected no rights and recognised no property when such respect or recognition conflicted with their pecuniary interests.

Little wonder that the peace and security afforded by the British administration, combined with government activity in developing and improving the resources of the country, led to material progress at a rate which elsewhere would be little short of miraculous. It is this material progress, hampered at first by recurring famines and always by disease, that has most affected the spread of population, and the account of the Punjab since it came under British rule may be confined to these subjects.

The progress made during the last ten years is detailed at some length in Section IV of this Chapter and it is unnecessary to deal with it here. Figures illustrating the development of the province from 1863 to 1911 are given in the following table: these have been taken from past Census Reports and other sources: in compiling the table it was found that figures obtained from different sources varied considerably and those which have been entered cannot be verified as accurate though they are quite near enough to illustrate all that is required of them. In some cases the figures do not refer to the actual year recorded above them, but to a preceding or following year; no attempt has been made to adjust the figures for subsequent changes of boundaries and they all refer to the province as it existed in the year under which they are entered:—

	1863.	1868.	1881.	1891.	1901.	1911.
Cultivated area Square miles	..	31,513	36,759	40,124	43,587	46,325
Irrigated area, Square miles	..	9,370	11,170	11,609	14,650	15,536
Irrigated by State Canals ..	1,165	1,758	2,351	3,868	6,631	9,753
Metalled Roads, Miles ..	..	859	1,467	2,239	1,932	2,559
Railways Miles ..	32	293	1,056	1,821	4,264	5,369
Number of Schools ..	..	1,846	2,068	9,640	7,170	7,278
Number of scholars in thousands	..	72	168	246	279	347
Number of literate per mille—						
Males ..	..	..	47	61	65	63
Females ..	..	..	1	2	3	6
Exports in lakhs—Maunds ..	..	..	103	160	249	556
Rupees ..	..	..	373	674	1,150	2,668
Imports in lakhs—Maunds ..	..	..	63	122	251	551
Rupees ..	..	..	710	929	1,516	2,094
Price of wheat, in rupees per maund ..	1-2-6	2-2-7	2-3-5	2-1-8	2-8-6	2-12-0

The railway mileage for 1901 and 1911 is that recorded in the Census Report of 1911, but in the Punjab Administration Report for 1911-12 the total railway mileage was shown as 4,043 miles ; apparently the latter figure only relates to the North-Western Railway.

The growth of cultivation, irrigation, communications and export, whilst adding to the prosperity of the people, have been the great safeguards against famine which has become of less and less frequent occurrence as the country has been developed ; the most severe famines which have occurred since annexation are noted below—

1851-52. Drought almost amounting to famine.

1860. Severe famine throughout the country east of the Sutlej ; the price of wheat in Delhi rose from 24 to 8 seers per rupee within 12 months. Government relief was organised on a large scale in Rohtak and Karnal and neighbouring districts.

1868-69. A far more severe famine in the same part of the country, government relief was given freely, over ten million daily rations were distributed but even so death from starvation was considerable. Fever, cholera and small-pox followed in the wake.

1877-78. Drought almost amounting to famine, accompanied by unprecedented cattle mortality.

1897. Scarcity throughout the province, severe in the south-east but scarcely amounting to famine.

1900. Severe scarcity approaching to famine conditions in the south-east.

1901-02. Famine in Hissar, a small amount of relief being necessitated.

1905. Scarcity in the south-east, famine relief works opened in Gurgaon.

1908. Famine conditions reappeared in Hissar and Gurgaon.

1911. Fodder scarcity.

1913. Fodder scarcity in the south-east.

1916. Scarcity not accompanied by famine in the south-east.

1919. Scarcity conditions in the Ambala Division and in Dera Ghazi Khan.

1920-21. An exceptionally bad year, necessitating remissions and suspensions of revenue and the granting of concession rates for carriage of fodder. No famine occurred, test relief works were opened in Hissar but proved unnecessary.

It may be said that no disastrous famine has occurred since 1868 ; scarcity conditions in recent years have never produced famines ; the agricultural conditions which prevailed in 1920-21 were such as would have led to severe famine fifty years before, but the establishment of a normal surplus of produce and the existence of a good system of railway communication sufficed to ward off famine without the help of government relief works.

It will be noticed that the south-east of the province has suffered most on every occasion of scarcity, and this fact adds weight to the quantitative analysis of agricultural conditions which has been set out in paragraph 18.

Deaths have been registered in the Punjab since 1867 and births since 1880 ; the system of registration is not such as to ensure that all the occurrences are recorded, but it has undergone steady improvement, so that the earlier figures on record are probably much below the truth. The recorded birth and death-rates for the inter-censal periods are given in the margin and according to them the excess of births over deaths was greatest in the period 1881 to 1900 and was nearly equalled in the last decade. Since 1880, when births were first recorded, the number of deaths has exceeded the number of births in eleven out of the forty-one years. These exceptionally unhealthy years, with the birth and death-rates recorded in them, are shown below—

Period.	*Rate per mille.* *Births*	*Deaths.*
1868-1880	.. ..	25
1881-1890	.. 39	31
1891-1900	.. 41	33
1901-1910	.. 41	44
1911-1920	.. 44	37

Year.		*Death-rate.*	*Birth-rate.*	*Loss per mille.*	*Chief cause.*
1890	..	47	39	8	Fever.
1892	..	49	38	11	Fever.
1900	..	48	41	7	Plague.
1901	..	36	35	1	Plague.
1902	..	44	44	..	Plague.
1903	..	49	43	6	Plague and fever.
1904	..	49	42	7	Plague.
1905	..	48	44	4	Plague.
1907	..	62	41	21	Plague.
1908	..	51	42	9	Fever.
1918	..	81	40	41	Influenza.

The ravages of plague for twenty years, and particularly between 1900 and 1907, constituted the most serious drain which the province has had to face since

it entered upon a peaceful history; it is to be hoped that the enormous death-roll of 1907 marked the culmination of its attacks, and that the comparative freedom which has since been enjoyed may continue. The whole period that plague has been present in India has been one of continuous research and effort on the part of the medical profession; knowledge of the disease and its causes has made great headway and, which is more important still, the people in general have learnt the simpler precautions which should be taken against it and have outgrown their earlier prejudices against those precautions.

All previous figures for mortality have been slight compared with those of the year 1918 when the country was paralysed by the influenza scourge, an account of which will be found in a subsequent paragraph. Had it not been for this visitation the last decade would have been the healthiest on record; the average death-rate, omitting 1918, was only 31·6, and though the rates recorded for the period 1868—1890 were less than this the improvement in registration must outweigh the recorded difference; on the other hand the birth-rate of 44 for the last decade is the highest on record in the province.

Censuses. 20. The census with which this report is concerned is the seventh taken in the Punjab. The census of 1881 was conducted with far greater detail and accuracy than the two which preceded it and is the first for which the majority of the statistics can be compared with those of later date. Since then a census has been held every ten years; the administration of each has been founded on that of the preceding one and the experience gained on each occasion has resulted in all probability in each census being a little more thorough in its administrative details and accurate in its statistical results. The dates of these censuses with the name of the officer deputed to superintend the operations and the territory concerned are noted below—

Date.	*Superintendent.*	*Territory.*
1st January 1855	.. Sir Donald McLeod	.. British Territory only; including the present Punjab and the North-West Frontier Province but omitting Delhi, Hissar, Rohtak, Gurgaon, and part of Karnal.
10th January 1868	.. Mr. A. Roberts	.. British Territory only; including the present North-West Frontier Province, Punjab and Delhi.
17th February 1881	.. Mr. D. J. Ibbetson	.. British Territory and the Punjab States, the former including the same territory as in 1868.
26th February 1891	.. Mr. E. D. Maclagan	.. The same territory as in 1881.
1st March 1901	.. Mr. H. A. Rose	.. The same territory as in 1891 but with separate statistics for (1) the Punjab including Delhi and (2) the North-West Frontier Province.
10th March 1911	.. Pandit Hari Kishen Kaul, R.B., C.I.E.	The Punjab including Delhi and the Punjab States.
18th March 1921	.. Mr. L. Middleton	.. The present Punjab and Punjab States with separate statistics for Delhi.

The following account of the territorial changes which have occurred since 1855 will be of assistance if this report is compared with those of past censuses:— In 1855 the Punjab did not include Hissar, Rohtak, Gurgaon, Karnal, Simla, Sheikhupura, Attock, Mianwali, Montgomery, Lyallpur and Muzaffargarh as separate districts, but did include Thanesar, Gugera, Leiah, Khangarh, Dera Ismail Khan, Peshawar and Kohat which no longer appear amongst its administrative units.

Between 1855 and 1868 Hissar, Rohtak, Gurgaon, Karnal and Sirsa were added by transfer from the old North-West Provinces; Thanesar was abolished as a district and its area distributed between Ambala and Karnal; Simla was recognised as a district and its administration separated from that of the surrounding Hill States. The new districts of Muzaffargarh, Montgomery and Bannu were created by rearrangement of the boundaries of Khangarh, Leiah, Gugera and Dera Ismail Khan and the first three of these ceased to be districts.

No changes of importance occurred between 1868 and 1881, but between 1881 and 1891 Sirsa was abolished and its area distributed between Ferozepore and Hissar.

In 1901 Mianwali was formed out of parts of Bannu and Dera Ismail Khan ; Rawalpindi was increased at the expense of Hazara ; and the districts of Peshawar and Kohat, with the remaining portions of Hazara, Bannu and Dera Ismail Khan, were removed from the province to form the new North-West Frontier Province.

In 1904 a new district of Attock was formed from parts of Rawalpindi and Jhelum, and in the same year Lyallpur was formed from parts of Jhang, Montgomery and Gujranwala. In 1909 and 1910 Muzaffargarh and Gujranwala were enlarged at the expense of Mianwali and Lahore respectively.

Changes which have occurred since 1911 are given in detail in paragraphs 2 and 3 of this chapter, and complete the history of the growth of the present limits of the Punjab and Delhi Provinces.

In addition to the changes in territory which are noted above many minor changes in boundaries, both internal and external, have occurred between the various census dates ; the tables prepared at the present census show figures for 1881 and onwards, accurately adjusted for all such changes, but contain no reference to the statistics of 1855 and 1868. It is now extremely difficult to adjust the figures of these two censuses so as to apply to existing administrative divisions, but the following attempt supplies a few leading statistics which may be accepted as approximately correct. The 1855 census showed 12,717,821 persons as enumerated in British Territory : Mr. Ibbetson worked out the 1855 population of that territory, together with that of the south-eastern districts which had been incorporated in the Punjab after 1855, at 15,161,321 persons, a figure which was also accepted by Mr. Maclagan. This figure however includes 1,209,736 persons in the districts which have gone into the North-West Frontier Province ; of these about 218,000 were in what is now Mianwali and 991,736 in the area now lost to the Punjab ; hence the 1855 population of the present Punjab and Delhi was about 14,169,585 persons. Of these about 597,440 were in the old Delhi District and of these again about 325,405 were in that part of the old Delhi District which now forms Delhi Province.

At the time of the 1855 census a careful estimate of the population of the Punjab States was prepared and that part of it connected with the present Punjab States amounted to 3,750,606 persons.

The 1868 census resulted in the enumeration of 17,611,498 persons, and minor territorial changes led Mr. Ibbetson and Mr. Maclagan to take 17,609,518 as the figure to compare with those for 1881 and 1891. This figure includes 1,718,200 persons residing in the old districts of Dera Ismail Khan, Bannu, Peshawar, Kohat and Hazara ; of these about 239,000 were in the area now known as Mianwali and the remaining 1,479,200 in the area since transferred to the North-West Frontier Province. Hence the 1868 population of the present Punjab and Delhi was about 16,130,318 and of these 608,850 were in the old Delhi District and of these again about 331,619 in the part of it which is now included in the new province of Delhi. We can now compare the total population at all seven censuses as follows :—

Year.		*Present Punjab.*	*Punjab States.*	*Present Delhi.*
1855	..	13,844,180	3,750,606	325,405
1868	..	15,798,699	..	331,619
1881	..	16,938,910	3,861,683	350,499
1891	..	18,652,202	4,263,280	372,766
1901	..	19,942,227	4,424,398	405,409
1911	..	19,578,573	4,212,794	413,447
1921	..	20,685,024	4,416,036	488,188

21. Accepting the figures given at the end of the last paragraph the annual rates of increase per cent. since the first census was taken have been as shown in the margin. **Fluctuations in Population 1855-1901.**

Years.		Punjab. British Territory.	Punjab. States.	Delhi.
1855-1868	..	1·09	0·11	0·15
1868-1881	..	0·56		0·44
1881-1891	..	1·01	1·04	0·64
1891-1901	..	0·69	0·38	0·88
1901-1911	..	—0·18	—0·48	0·20
1911-1921	..	0·57	0·48	1·81

It is possible that the increased accuracy of records at each census, at any rate up to 1891, accounted for an appreciable amount of the apparent increase and, if this is so, the actual rate of increase has been more steady than that shown by the figures.

The period between the censuses of 1855 and 1868, though it witnessed the mutiny, was one of extreme quiet and great progress compared with the times which had preceded it. The 1868 census report estimates that the cultivated area

increased by nearly 32 per cent. in the thirteen years; the only perennial canal which was open at the time of annexation was the Western Jumna which then irrigated some 625 square miles in Karnal and Delhi; by 1868 it was irrigating 750 square miles whilst 470 more were irrigated by the Upper Bari Doab which had then been open for eight years; inundation canals irrigated rather over 500 square miles at annexation and 800 by 1868. Between 1855 and 1868 the number of miles of railway open to traffic rose from 32 to 468;* and in the latter year there were 760 miles of telegraph line in operation and an annual delivery of ten million letters within the province.

This peace and progress was naturally favourable to the increase of population and, though there was a severe famine in 1860, it is not surprising that the annual rate of increase which amounted to 1·09 in British Territory should be higher than any that has been recorded since.

In the 1891 report it will be seen that the increase between 1855 and 1868 is given as 16·1 per cent. and that there was difficulty in accounting for this great increase. Possibly much of it was fictitious and due to incomplete enumeration in 1855 in the wilder districts now included in the North-West Frontier Province; the omission of that area from the figures reduces the increase to 14·1 per cent. which is not improbably great.

The next inter-censal period was one of even more marked peace and progress; great attention was paid to the construction of metalled roads and railways, the length of which had risen by 1,881 to 1467 and 1,056 miles respectively; the number of patients treated annually in government dispensaries rose from 471 to 1,368 thousand; the number of school-children more than doubled, and the post and telegraph services were enormously improved. But the initial bound with which the people of the province had recovered after their long existence amidst anarchy and oppression had reached the top of its trajectory in 1868 and thereafter was losing momentum; cultivation increased by only 17 per cent., extension of canals progressed somewhat less rapidly than before and the irrigated area rose by only 19 per cent.; the increase in population was only half that in the previous period and was at the annual rate of 0·56 per cent.; it is probable however that the rate was greater than this up to 1878 after which followed three years of scarcity and sickness.

It is useless to discuss the rate of increase in population in the Punjab States previous to 1881 for the only record of that population is given by the estimate prepared in 1855 which did not rest on actual enumeration.

During the decade ending in 1891 the increase in population was again rapid and at the average rate of 1·01 per cent. per annum; the aggregate increase of 10·1 per cent. was only accompanied by an increase of just under 10 per cent. in the area under cultivation, and, though the area irrigated by State canals rose by 64 per cent., the increase in irrigation of all sorts was very slight.

The rapid increase in population occurring in conjunction with a diminution in the rate of extension of cultivation is all the more surprising when it is noted that the recorded death-rate was 31 per *mille* as against 25 per *mille* in the previous period, and that in the year before the census was taken it rose to 39 per *mille* and was largely in excess of the birth-rate. It is true that material progress other than agricultural had been rapid, but this has little immediate effect on population, and the only circumstances in which the decade appears to have been more favourable than the previous period was the total absence of famine. The Census Report of 1891 ascribes the rapid increase entirely to this one feature and supports this theory by comparative examination of the rates of increase in different tracts.

The average rate of increase in the Punjab States was 1·04 per cent. as compared with 1·01 in British Territory, whilst the balance of migration during the period was from the States to British Territory; if this migration be eliminated the annual rates come to 0·99 and 1·11 respectively. A large portion of the population of the States lives in the south-east of the province which had always been the part most affected by scarcity and famine; in a period in which population increased rapidly on account of freedom from scarcity it is natural to expect the greatest increase in the tracts previously most liable to scarcity. A comparison of the figures for States with those of adjacent districts shows

* The railway mileage of 1868 is shown as 293 in the Census Report of 1891 and as 468 in that of 1881; departmental reports show that 410 miles were open in 1872.

that the greater increase was due to accident of position and not to any peculiar difference between the States and British Territory.

The next ten years were marked by much extension of canal irrigation and the foundation of the first of the great canal colonies. The area irrigated by State canals increased by 71 per cent. and the total amount of irrigation by 25 per cent.; but on the other hand the extension of cultivation was practically confined to the newly irrigated colony lands and the total increase amounted to less than 8 per cent.

The limits of cultivation were being approached in the long settled tracts, and whilst famine was ceasing to be a deciding factor in spread of population its place was being taken by density and pressure on resources.

There was no actual famine during the decade but great scarcity prevailed more than once in the south-eastern districts, yet communications and distribution had so improved that this scarcity did not affect the numbers of the population and in these districts the increase was not less than in those which did not suffer.

Both the death and birth-rates showed an increase over those for the previous decade, partly due no doubt to more complete registration, but the excess of the latter over the former remained the same; there were however two bad years, 1892 and 1900, in which the deaths largely outnumbered births and the period cannot be described as healthy. It was in this decade that plague first made its appearance and commenced its long and bitter warfare against the health of the province.

With increasing density and a less rapid extension of cultivation a diminution in the rate of increase of population was natural and the drop in that rate to 0·69 per annum is fully accounted for by these factors.

The rate of increase in State Territory was 0·38 per annum, but part of the difference was due to migration from the States to British Territory, and if this be eliminated the rates of increase for British and State Territory come to 0·67 and 0·46 respectively. Except in Patiala, where the increase was much less than in adjoining British districts, the detailed figures are very similar for states and districts which lie near each other.

We can sum up the principal factors in the variation in population in the four inter-censal periods which have been discussed as follows:—

1855-68. A period of resilient recovery from oppression, enabling a depleted population to increase at a rate impossible under normal conditions.

1868-81. A period starting under more normal conditions allowing less but yet ample room for increase and therefore showing a declining rate, the decline in the rate being intensified by scarcity and disease in the last few years.

1881-91. A decade free from scarcity and famine which allowed a rapid increase in a country not yet fully populated.

1891-1901. A decade in which pressure on resources began to be felt and in which extension of cultivation was almost entirely confined to tracts opened up by new canals. Colonisation was as yet so recent as to have led to no appreciable increase in population as a result of relief of pressure. Health conditions somewhat adverse.

Though these may be the principal factors it must be realised that no summing up can attempt to do more than indicate a few which stand out amongst the multitude of conditions and fortuitous events which affect the growth of population.

22. In connection with changes in population the decade 1901-11 was marked by one overwhelming feature rendering all others insignificant in comparison, this was the terrible prevalence of disease; fever, to which the greatest mortality in the province is invariably due, was more widespread and fatal than ever and was accompanied by epidemics of plague of great violence. The crude birth and death-rates for each year of the decade are shown in the margin and Variations in the Decade 1901-1911.

Year.	Death-rate from			Birth-rate.
	All causes	Fever.	Plague.	
1901 ..	35	25	1	35
1902 ..	44	24	9	44
1903 ..	49	25	10	42
1904 ..	49	19	20	42
1905 ..	47	19	17	44
1906 ..	36	20	5	44
1907 ..	61	20	30	40
1908 ..	50	35	2	42
1909 ..	31	21	2	35
1910 ..	33	17	7	42
1901-10 ..	44	23	10	41

Year.		Death-rate from			Birth rate.
		All causes.	Fever.	Plague.	
1868-1880	..	25	16	..	..
1881-1890	..	31	..	..	39
1891-1900	..	33	23	..	41
1911-1920	..	37	23	3	44

compared with those for other census periods; in comparing these it should be noted that by omitting the totally exceptional year 1918 from the decade 1911-20 the death-rate from fever is reduced to 18 and the total death-rate to 32.

As far as any violently fluctuating quantity can be said to have a normal, the normal death-rate from fever may be placed at about 18; this normal was exceeded in every year of the decade except the last and the rate rose to an unprecedented height in 1908. Plague was unknown in the Punjab before 1896 and recent experience leads to the hope that it reached its maximum intensity during the decade and may eventually disappear; every part of the province except the dry tracts in the west and the hill districts in the north-east suffered severely; one of its worst features was that it caused a greater mortality amongst females than males and thereby accentuated the disparity between the sexes which has always been a feature of the Punjab, and hence not only reduced the population but affected it in such a way as to lower its reproductive capacity.

1901-10.		Males.	Females.
Deaths	..	4,459,990	4,383,718
Births	.	4,340,338	3,945,923
Difference	..	119,652	437,795

In every year of the decade except 1906, 1909 and 1910 more deaths were registered than births, and for the whole decade the vital statistics, which are reproduced in the margin, showed an excess of deaths over births amounting to 557,447 in British Territory alone; but, owing to migration and other disturbing causes, the census results showed an increase of 46,672 males and a decrease of only 402,979 females resulting in a total decrease of about 355 thousand. This decrease amounted to 1·8 per cent. of the 1901 population and was accompanied by a decrease of over 211 thousand or 4·8 per cent. in the Punjab States, the most important of which are situated in the tracts most affected by the epidemics; the decrease in the Punjab as a whole amounted to 2 per cent. and was accompanied by a decline from 854 to 817 in the number of females to a thousand males.

In the middle of this period of disease and death occurred the terrible earthquake of 1905 which was felt almost throughout the province and was most intense in the western parts of the Kangra District; in the zone of greatest destruction this earthquake caused over 20,000 deaths amongst a population estimated at about 375,000.

As a result of government activities material progress, though necessarily hampered by the unfavourable health conditions, was very great. Irrigation from government canals was extended rapidly; the Lower Jhelum Canal was opened in 1901 and by 1910 had brought water to 1,166 square miles of previously unirrigated land; the area irrigated from the Lower Chenab was increased by 602 square miles; 1,105 miles of new railway routes were opened, the most important being those serving the new canal colonies; the post and telegraph services were extended and improved.

Colonisation of the dry areas brought under canal irrigation was pushed on throughout the decade and, after the abnormal health conditions, formed the most important factor in the growth and movement of population. Whilst the population of the Indo-Gangetic plain and of the Sub-Himalayan area dropped by 8·9 and 5·9 per cent. respectively and whilst that of the hill tract only increased by 2·0 per cent. there was an increase of no less than 17·8 per cent. in the North-West Dry Area which includes these colonies; this was due both to immigration and to partial immunity from plague; the increase of 655,551 persons was accompanied by an excess of births over deaths amounting to 440,648 and more than one-eighth of the population were recorded as immigrants from elsewhere at the census of 1911.

The colonisation, being entirely provincial, had no direct effect upon the total population of the province, but indirectly, by transferring persons from

congested to sparsely populated tracts, it must have encouraged its growth; by chance it also encouraged its growth by removing persons from districts which were afterwards most affected by disease to tracts where it was less severe. It is impossible to isolate the various factors affecting the growth of colony population, but that the "natural increase" is accelerated in the newly colonised regions appears to be indisputable from a consideration of the position of the Lyallpur District, which consists entirely of canal colony, in the following groups selected from the census statistics of 1911—

(*a*) Districts in which the greatest increase in population occurred between 1901 and 1911—
Lyallpur 45·5 per cent., Shahpur 29·8 per cent., Jhang 21·1 per cent., Multan 14·7 per cent.

(*b*) Districts in which the proportion of immigrants per *mille* of total population was greatest in 1911—
Lyallpur 660, Delhi 245, Shahpur 211, Lahore 211.

(*c*) Districts in which the birth-rates were highest in the decade 1901-10—Jhang 78, Gujranwala 48, Lyallpur 47, Sialkot 46.

(*d*) Districts in which the death-rates were lowest in the decade 1901-10—
Dera Ghazi Khan 25, Lyallpur 26, Mianwali 29.

(*e*) Districts in which the proportion of children under ten years of age to persons between 15 and 40 years of age was highest in 1911—
Mianwali 90, Lyallpur 85, Montgomery 84, Jhang 83.

(*f*) Districts in which the proportion of children under ten years of age to married women between 15 and 40 years of age was highest in 1911—
Lyallpur 229, Montgomery 227, Mianwali 222, Jhang 220.

That Lyallpur comes very near the head of a list of twenty-eight districts (Simla has been omitted as being abnormal) in lists *c*, *d*, *e* and *f* indicates very clearly that in colony tracts the reproductive power of the population is higher than elsewhere; allowance must be made for the facts that plague was not so prevalent in Lyallpur as in many districts, that colonists include many of the most virile of the population, and that the proportion of aged persons amongst them is small; but on the other hand the colonisation of Lyallpur had mainly taken place before 1901 and the marginal figures show that most of the increase during the decade was by natural reproduction and not by the immigration of persons in the middle periods of life.

Increase per cent. in Lyallpur by age-groups

Total	8·3
0—10	21 3
10—15	0·6
15—40	3·2
40—60	2 1
60 and over	10·3

The fact that the Shahpur District which may be taken as typical of the new Jhelum Colony, appears high up in lists *a* and *b* but not in *c*, *d*, *e* and *f* confirms the general conclusion; that district was so newly colonised in 1911 that the population had not had time to show the effect of the new conditions in which it lived. It can be concluded that in the decade 1891-1900 the colonisation of the Chenab Colony effected a movement of population but had not begun to affect the increase of population, and that in the decade 1901-10 the Jhelum Colony showed the same feature whilst the Chenab Colony was beginning to take effect on the increase of population whilst losing its influence on the movement thereof.

The result of a declining population in a province which was beginning to feel the effect of density of population in its settled tracts, associated with Government extension of irrigation facilities, is illustrated by the curious figures for extension of cultivation and irrigation shown below—

	Area in square miles in		Increase in the decade 1900-1910.	
	1900.	1910.	Total	Per cent.
Irrigated from State canals	6,631	9,753	3,122	47
Irrigated from private canals	1,287	802	—485	—38
Irrigated from wells	6,492	4,665	—1,827	—28
Irrigated from other sources	240	316	—76	—32
Total irrigated area	14,650	15,536	886	6
Cultivated area	43,587	46,325	2,738	6

The increase in area irrigated through government agency was almost nullified by the decline in other sorts of irrigation.

The new canal irrigation was largely in tracts which had previously been unculturable (we have already noted that the Lower Jhelum Canal irrigated 1,166 square miles and that that of the Lower Chenab was extended by 602 square miles, all of which had been practically desert waste before), and hence was necessarily associated with new cultivation; yet the total increase in cultivated area was less than the increase in area irrigated by State canals, showing that, outside the colonies, cultivation must have remained practically stationary.

The figures suggest two rather contradictory conclusions;—that diminution of labour by disease and emigration resulted in contraction of effort, and that cultivation in the old districts had already been extended so far that it could go no further; the first indicates a body of labour only just sufficient to cultivate the land, the second indicates a pressure of population on resources. The history of previous periods however all goes to show that the latter is the correct inference, and the former may be largely discounted on the ground that 1900 was an exceptionally dry year in which all wells were worked to their utmost capacity.

The public health and agricultural progress of the decade form gloomy subjects, and it is a relief to turn to the brighter picture afforded by the economic aspect of the peoples' life and the extension in trade and industrial effort.

The harvests of the decade were, on the whole, above average, prices fluctuated considerably but showed a marked rise above those of previous periods; wages rose practically in proportion to prices, so that consumers did not suffer whilst producers flourished. The position of the agricultural community was strengthened by the passing of the Land Alienation Act of 1901 and at the same time a growing interest in co-operative credit societies which sprang up in districts scattered throughout the province led to a great improvement in the economic position of those who joined them.

The average wages of agricultural labourers and of artisans in towns are shown in the inset table and compared with the average price of wheat; there being no material on which to base an index number, the purchasing power of

Year.	Price of wheat per maund.	Average monthly wages.			
		Agricultural.		*Urban (artisans).*	
		Rupees	Maunds of wheat.	Rupees.	Maunds of wheat.
	Rs. a. p.	Rs. a. p.		Rs. a. p.	
1901	2 8 0	7 7 0	2·98	18 0 0	7·20
1902	2 4 0	7 11 0	3·42	19 8 0	8·86
1903	2 4 0	6 12 0	3·00	18 4 0	8·11
1904	2 0 0	7 8 0	3·33	18 2 0	9·06
1905	2 8 0	7 2 0	2·85	21 4 0	8·50
1906	2 8 0	8 4 0	3·30	22 8 0	9·00
1907	2 12 0	9 14 0	3·59	24 0 0	8·73
1908	4 0 0	10 3 0	2·55	30 14 0	7·72
1909	3 12 0	10 7 0	2·78	27 0 0	7·20

wages has been shown in wheat which, being a common food and a staple which tends to regulate the price of a large number of other commodities, helps to indicate the real fluctuations in wages.

The number of factories employing twenty or more operatives rose from 132 in 1900 to 443 in 1911; both the volume and value of imports and exports was more than doubled in the decade; towards the latter end of the decade there was a boom in company promoting, and although most of the companies were unsound or even fraudulent their flotation showed the growth of a more enterprising spirit amongst those with capital and indicated that there was scope for more healthy enterprises.

Section IV.—The Conditions of the Decade 1911-21

23. The decade opened in hopeful circumstances ; two years had gone by in which the general health had been good and promised a freedom from the epidemics and heavy mortality which had marked the previous eight years ; a succession of satisfactory harvests, high prices for produce accompanied by a rise in wages sufficient to cover that rise, and a rapidly increasing export and import trade had left both the agricultural and trading communities in a condition of prosperity ; the presence of capital and a desire to utilise it was indicated by the rapid expansion of joint-stock enterprise, and a real step forward in industry had been taken and had resulted in the number of factories doubling within the space of ten years. The terrible wave of disease had left a diminished population with a reduced capacity for reproduction, but on the other hand had been most severe in the more densely populated tracts and had helped to equalise the distribution of the people ; the opening of canals in the deserts of the west and the colonisation of the areas commanded by them had gone far to relieve the pressure in the districts from which the colonists had been drawn, whilst in those parts which had been first colonised the population was increasing rapidly and exhibited a marked increase in vitality. General.

Unfortunately the first autumn crop of the decade was a bad one, but it was succeeded by a good crop in the following spring, so that on the whole the first year was an average one ; it was succeeded by two years of fair harvests and the fourth year of the decade 1914-15 produced bumper crops at both seasons. This period was one in which the public health was excellent, the death-rate was low, and the birth-rate increased each year showing the marvellous recuperative powers of the people whose fertility had suffered much as a result of the widespread fever epidemic of 1908. During the first three years of the decade the exports from the province increased at a very rapid rate and were associated with a rather smaller increase in imports resulting in the balance of trade turning in favour of the province ; joint stock enterprise continued to boom and, though a large number of companies failed, there was a great rush to register new companies of all natures.

This wave of good health, prosperity and enterprise now received a check. The boom in company promoting came to a sudden end ; the majority of ventures had been unsound from the start and were doomed to failure, and in 1912-13 a large number of fraudulent provident societies were wound up ; in the following year there was a banking crisis and ten banks failed, to be followed by nineteen more in the next year ; thereafter joint stock enterprise declined, its unsound nature having shaken the faith of the would-be investor.

The outbreak of war in August 1914 was accompanied by less disturbance in the life of the province than might have been expected ; its one immediate effect was to reduce the amount of exports and imports but it had little effect on prices till 1917 ; though the people of the Punjab responded magnificently to the call for recruits and added lustre to their ancient martial traditions in every war area, and though the reality of war was brought home to every village throughout the province, the direct effect of the war on population statistics is too small to be traceable.

In 1915 a severe outbreak of plague put an end to the period of increasing good health and vitality and the year showed a rising death-rate associated with a declining birth-rate ; the harvests of 1915-16 were both of them bad, the production in the province was no longer able to nullify the effect of the war on prices and in 1917 commenced a period in which prices rose too rapidly to allow the economic system of the country to adjust itself and in which distress and hardship made itself felt. The strain on the railway systems of the country resulted in a dislocation of communications and markets, and to some extent the province reverted to its condition of earlier days in which local variations in production had undue effect on local prices.

Political disturbance, engineered from Germany and America, in the early days of war had produced a feeling of restlessness and the economic pressure enhanced this feeling and provided a fertile field for the dissemination of political propaganda of a virulent anarchic type.

Disastrous harvests in 1918-19, and the unparalleled loss of life which accompanied an epidemic of influenza in the latter part of 1918, brought matters to a climax ; open mutiny had to be quelled by force in the spring of 1919 and left an

aftermath of racial feeling accompanied by industrial unrest resulting in strikes and open opposition to authority.

Good harvests in 1919-20 proved insufficient to stay the upward rush of prices, and a general failure of crops in 1920-21 created a previously unknown position in which the margin of export proved insufficient to regulate prices which therefore became dependent upon local supply and demand and soared to heights hitherto unknown,—so high that wheat was actually imported into India from Australia in spite of the heavy freightage charges.

The decade closed amidst a general gloom contrasting strongly with the cheerful circumstances in which it had opened; in that gloom however there were yet signs of better times to come; the population was showing a recovery from the effects of the influenza unequalled anywhere else in India; the agricultural community had weathered the storm with remarkable buoyancy and a magnificent spread of co-operative endeavour had placed large numbers from amongst it in a position to reap full benefit from any improvement in conditions; trading returns were increasing rapidly in value if not in bulk and joint stock enterprise, cleansed by the failures of the earlier years, was beginning to make slight progress on sounder lines.

The War.

24. The Punjab, with its courageous and head-strong Sikhs of the plains, its determined Musalman fighting races of the Salt Range, its disciplined and steadfast Dogras of the foot-hills, and closely associated as it is with the cheerful and pugnacious Gurkhas of Nepal, has long been known as the Sword-Arm of India. These elements in its population with many others, some of whom had already been tried and tempered in the furnace of war and some who had not, all combined to add further meaning and point to that name during the long struggle in which the British Empire had to call upon its resources in men and material to the uttermost limits of its boundaries and outposts.

On practically every front in Europe, Asia and Africa the Punjabi was at some time or another to be found fighting and laying down his life in a struggle of which he but dimly realised the meaning; in his distant home-country his relations were training and rendering themselves fit to join him, all sections of the people were contributing in service or cash towards the success of the venture in which he was engaged, and the countryside itself was raising produce and even surrendering the capital improvements it had collected in times of peace in the same great cause.

At the census of 1911 the number of men enumerated in the province who were employed in the Imperial and Indian State Armies were 65,283 and 9,375 respectively, these numbers including reservists and men on leave in the province; it was independently ascertained that there were at that time, apart from reservists, 94,701 Punjabis serving in the Imperial Army; of these 23,310 were stationed in the Punjab, 69,173 in other parts of India and 2,218 outside India.

At the beginning of 1915 there were over 103,000 Punjabis, of whom 86,967 were combatants, in the Indian Army; during the war no less than 395,493 men were enlisted in the province and the total number who served in the army during the continuance of war was only just below half a million. Detailed figures for districts and States are reproduced below by the courtesy of Mr. M. S. Leigh from whose war history they have been abstracted; they are inserted here, not as a tribute to the magnificent efforts they illustrate, but as statistics showing the distribution of the martial races in the Punjab and throwing some light on the monetary resources of its inhabitants as shown by their contributions to objects connected with the war—

District or State.	Number of males of military age in thousands.	Combatants in the Indian Army on 1st January 1915.	Number of men who served during the war.	Number of fatal casualties.	Total contributions to War Funds and Charities in thousands of rupees.	Total contributions to War Loans in thousands of rupees.
Hissar	134	3,046	18,400	344	163	8,290
Rohtak	118	6,245	28,245	692	92	2,413
Gurgaon	124	2,481	20,181	314	169	1,434
Karnal	134	633	6,819	67	131	2,445
Ambala	121	1,755	10,254	315	173	2,598
Simla	72	217	2,213	50	224	6,124

District or State.	Number of males of military age in thousands.	Combatants in the Indian Army on 1st January 1915.	Number of men who served during the war.	Number of fatal casualties.	Total contributions to War Funds and Charities in thousands of rupees.	Total contributions to War Loans in thousands of rupees.
Kangra	123	5,796	17,113	823	129	615
Hoshiarpur	153	5,901	21,153	791	114	1,365
Jullundur	138	3,286	16,404	572	177	3,827
Ludhiana	90	5,995	23,341	622	180	2,909
Ferozepore	166	2,224	20,539	325	441	5,971
Lahore	182	1,501	10,800	322	306	15,417
Amritsar	152	5,328	23,500	804	239	4,329
Gurdaspur	144	2,395	19,204	502	229	2,415
Sialkot	166	2,709	15,339	450	69	1,733
Gujranwala	158	1,643	14,843	271	225	2,136
Gujrat	129	4,510	27,335	672	83	1,016
Shahpur	108	2,834	15,500	210	277	1,742
Jhelum	82	8,652	31,881	990	203	1,104
Rawalpndi	90	8,524	36,292	1,336	213	3,921
Attock	84	2,849	18,851	383	104	1,169
Mianwali	56	1,159	5,000	187	269	623
Montgomery	89	14	3,002	25	130	1,229
Lyallpur	149	338	8,266	102	369	6,479
Jhang	85	44	955	9	105	1,390
Multan	136	39	4,700	16	176	2,990
Muzaffargarh	95	18	2,042	6	118	649
Dera Ghazi Khan	89	10	1,047	8	65	612
BRITISH DISTRICTS	3,367	80,146	423,006	11,208	5,171	86,941
Dujana	4	..	1,266	7	8	19
Pataudi	3	..	450	..	50	224
Kalsia	10	..	1,014	3	138	363
Loharu	3	6	378	1	7	35
Nahan	23	..	1,207	32	684	37
Mandi	29	..	1,124	8	96	628
Suket	9	..	240	3	191	94
Kapurthala	46	271	5,914	115	1,108	1,401
Malerkotla	12	178	3,934	61	1,870	336
Faridkot	23	88	2,759	45	672	1,789
Chamba	22	8	499	27	269	384
Patiala	243	3,898	37,020	780	8,232	4,500
Jind	46	1,283	8,673	311	2,013	1,150
Nabha	43	1,086	7,000	184	994	3,253
Bahawalpur	131	3	4,085	9	611	11,535
STATES	647	6,821	75,563	1,586	16,943	26,028
Contributed by the staff of various Government departments.				..	372	..
TOTAL PUNJAB	4,014	86,967	498,569	12,794	22,486	112,969

Close on one-eighth of the total number of males of military age joined the army ; in Rawalpindi and Jhelum Districts more than one man in every three served with the colours during the war. Contributions to war funds and war loans amounted to thirteen and a half crores or to over five and a half rupees per head of population.

The indirect effects of the war have been roughly indicated in the preceding paragraph and will be treated more fully in the succeeding paragraphs which deal with several phases of the provincial life which were materially influenced by war conditions.

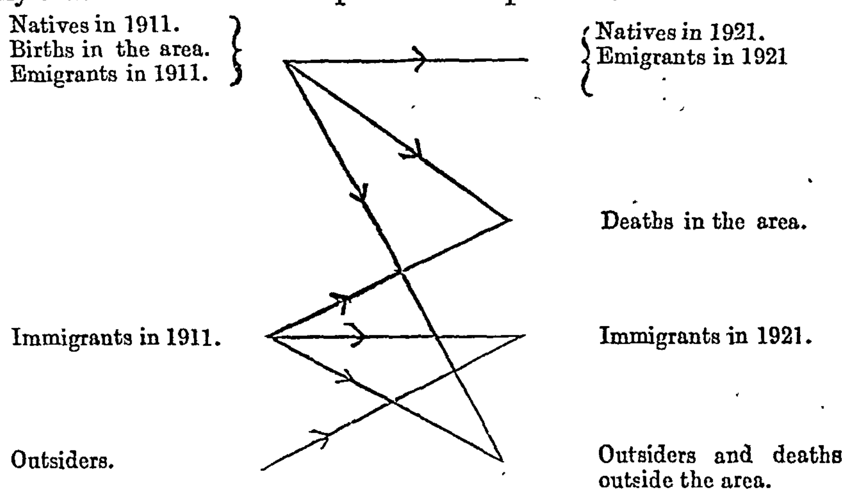
It comes as a shock to the imagination to compare the mortality directly caused by the war with that due to natural causes ; though war casualties were amongst the pick of the population they were numerically insignificant when contrasted with the death-roll caused by the slightest of epidemics ; indeed it is undoubtedly true, as observed by Mr. Leigh, that the war saved more lives in the Punjab owing to the collection of men in cantonments where the ravages of influenza in 1918 were met by efficient medical precautions and remedies than it wasted on the field of battle. It is possible that the absence of so large a proportion of the able-bodied from their homes indirectly affected the population by lowering the birth-rate, but so many of these men were able to visit their homes on leave that the effect was not great enough to be discoverable from statistics. With regard

to its effect upon the numbers of the population the war is an almost negligible factor of a decade which it itself will render unique in history as long as civilisation lasts.

Relation between Vital Statistics and Census Results.

25. We have already had to refer to vital statistics, and, before discussing those for the last decade in detail, it is necessary to examine the theoretical relation between them and census results and to try to estimate the extent to which reliance can be placed on their accuracy. The system of registration of births and deaths, which is the basis of the vital statistics, was fully described in the Census Report of 1911 and need not be discussed at length; suffice it to say that it depends on periodical reports made at police stations by petty village officers. The illiteracy of the majority of the individuals responsible for the reports combined with the difficulty of ensuring any effective check on the accuracy of their reports renders many omissions possible but does not lead to the registration of any events which have not occurred, and it is therefore probable that the statistics show too few births and deaths; on the other hand the ratio of error by omission is probably much the same from year to year and from district to district, hence in normal times the vital statistics should give an accurate comparison of conditions in different places and at different times. On the whole, deaths are more widely known than births and possibly the vital statistics tend to omit more births than deaths, in which case they lead to an expectation of a larger population than is revealed by an ensuing census, as was the case in 1911; on the other hand severe epidemics, such as the influenza epidemic of 1918, form occasions on which it is impossible for the village officer to keep account of the deaths which are occurring on every side, and in some localities they may carry off all those officers whose duty it is to make and receive reports; *a priori* the number of deaths registered during such epidemics may be expected to be far less than those which actually take place.

There is no satisfactory way of comparing vital statistics with census results for areas subject to fluctuating migration; using the term native to indicate a person born and enumerated in the area concerned, the following diagram shows immediately that the solution of the problem is impossible :—



We have figures for the first two quantities on the left and for the first three quantities on the right of the diagram; each of the seven lines shows the origin and goal of an unknown number of persons; in mathematical language we have seven unknowns connected with five known quantities by only five equations; there is no one correct solution to such a problem and hence to correlate vital statistics with census figures we must import various assumptions as to the nature of the stream of migration.

Without resorting to mathematical reasoning we can illustrate the impossibility by quoting an extreme case :—suppose that soon after the census of 1911 a great wave of migration entirely altered the constitution of the population of any tract and that a return wave occurred before the census of 1921, then the vital statistics refer to persons who were in the tract neither in 1911 nor in 1921 and hence have no connection with the census figures.

Subsidiary Table V at the end of this chapter contrasts the increase in the actual and natural populations of all districts with the excess of births over deaths

during the decade, that is, with the natural increase; but before that table can be of any use it is necessary to understand how far the three sets of figures should agree if they were absolutely accurate, and I therefore explain the connection between them below :—*The increase in actual population exceeds the natural increase by the excess of immigration over emigration in the decade.*

The natural population of 1921 equals the natural population of 1911 plus all births in the district minus deaths amongst persons born in the district. But the deaths amongst personsborn in the district equal the deaths in the district minus the deaths amongst immigrants plus the deaths amongst emigrants. Hence *the increase in natural population exceeds the natural increase by the excess of deaths amongst immigrants over deaths amongst emigrants.*

To compare the figures we want, in the first case, to know the excess of immigration over emigration in the decade, and in the second case, to know the excess of deaths amongst immigrants over those amongst emigrants; neither of these quantities are known and neither of them can be calculated from the figures available.

As a matter of fact the two equations which have been mentioned are identical :—the immigration during the decade equals the immigrants enumerated in 1921 minus those enumerated in 1911 minus the deaths amongst immigrants; similarly, the emigration during the decade equals the number of emigrants enumerated in 1921 minus those enumerated in 1911 minus the number of deaths amongst emigrants. If we substitute these equivalents in the first equation it reduces itself to the second equation.

We can however establish a direct connection between the census figures and the vital statistics provided we assume that the stream of migration is constant and also assume some reasonable death-rate as being applicable to migrants.

The death-rate in the Punjab has averaged 36·2 per *mille* during the last decade, but 44·7 of the deaths have been amongst children of less than five years of age so that the death-rate amongst the remainder has only been 20 per *mille*. Most of the migration of the Punjab is within the province and the migrants include few children of tender age, hence it is reasonable to assume a general death-rate of 20 per *mille* amongst them.

With this general death-rate one fiftieth of the immigrants present in 1911 die each year and at the end of the decade only four-fifths of them survive. Of 1,000 new immigrants coming in during the year 1911-12 ten die in that year and twenty in each of the nine remaining years so that 810 survive at the end of the decade; of 1,000 new-comers in 1912-13 ten die in that year and twenty in each of the remaining years so that 830 survive; and so on. Thus out of 10,000 new immigrants who come in during the decade only 9,000 survive as shown in the margin.

810
830
850
870
890
910
930
950
970
990
9,000

The immigrants in 1921 are made up of the survivors of those present in 1911 and of the survivors of the new immigrants who came in during the decade, hence the number of immigrants enumerated in 1921 equals four-fifths of those enumerated in 1911 together with nine-tenths of those who have come in since that year. Hence the number of immigrants of the decade can be calculated from the census figures and in an exactly similar way the number of emigrants during the decade can also be calculated.

The excess of immigrants over emigrants during the decade has been calculated according to this method for every district and state and the results are entered in column 11 of Subsidiary Table IV.

But, as we have already seen, the total increase in any district is made up of this excess and of the excess of births over deaths; hence we can calculate the excess of births over deaths from the census figures alone and compare the result with the numbers actually recorded.

As the system of registration precludes the possibility of more births or deaths being recorded than actually occur, any error in the vital statistics must be in the direction of showing too few; and if calculation from the census figures shows a greater excess of births over deaths than the recorded figures the error must be in the number of births recorded and *vice versa*.

The inset table shows the corrections that must be applied to the vital statistics in order to make them agree with census results, *provided* the assumptions on which the calculations have been based do not vitiate the argument; but before we can accept these corrections we must see how far those assumptions are justifiable. The assumptions that have been made are:—(1) The death-rate amongst migrants is about 20 per *mille*; (2) the same number of immigrants come in and the same number of emigrants go out every year; and (3) once an immigrant comes to a district he does not leave it and an emigrant never returns.

District.	Recorded deaths.	Calculated deaths.	Difference per cent.
Attock ..	168,959	197,076	16·6
Gujrat ..	267,052	300,735	12·7
Mianwali ..	115,762	127,117	9·8
Lyallpur ..	258,860	183,870	9·7
Jhelum ..	170,358	186,306	9·4
Gurdaspur ..	324,812	352,541	8·5
Jhang ..	162,445	175,448	8·1
Sialkot ..	359,708	388,609	8·0
Muzaffargarh ..	187,897	201,612	7·3
Rawalpindi ..	191,626	203,480	6·2
Multan ..	265,634	280,362	5·5
Kangra ..	257,856	269,209	5·2
Hoshiarpur ..	316,059	329,577	4·3
Ludhiana ..	203,639	211,410	3·8
Hissar ..	294,117	304,337	3·5
Karnal ..	353,466	358,998	1·6
Dera Ghazi Khan ..	146,043	165,504	1·3
Ambala ..	273,820	275,420	0·6
Amritsar ..	363,498	365,328	0·5
	Recorded births.	**Calculated births.**	**Difference per cent.**
Ferozepore ..	457,256	457,689	0·0
Jullundur ..	353,093	356,354	0·9
Lahore ..	485,359	493,501	1·7
Montgomery ..	229,082	280,902	21·3
Shahpur ..	268,459	336,711	25·4
Simla ..	8,286	21,202	155·9

The first assumption is based on general grounds and it is safe to assume that the death-rate amongst migrants is not far from 20 per *mille*; for the sake of argument let us assume the impossibly high death-rate of 40 per *mille* amongst migrants and work out the result; selecting a few districts at random we find that in Attock the recorded deaths should be increased by 14·9 instead of 16·6 per cent.; in Multan by 6·8 instead of by 5·5; in Kangra by 3·1 instead of 5·2; whilst in Shahpur the recorded births should be increased by 17·4 instead of by 25·4. The result of assuming an impossibly high death-rate is to alter the conclusions but slightly, hence the result of 20 per *mille* not being an absolutely correct death-rate for migrants will affect the results very slightly indeed. In other words the first assumption scarcely affects the accuracy of the result.

Now take the second assumption; by assuming that the migration was constant we found that nine-tenths of the migrants of the decade survive at the end of it; if all the migration occurred directly after the 1911 census then four-fifths of them would survive, whilst if it all occurred just before the last census the whole of them would survive; in other words, the difference caused in the figures in column 11 of Subsidiary Table IV would have to be increased or decreased by only one-ninth even if the whole migration took place in 1911 or in 1921, hence the difference necessary in them on account of the slightly fluctuating nature of migration must be very slight indeed.

The third assumption however leads us further astray as much migration is temporary; if an immigrant both arrives and departs during the decade he has no effect at all on the statistics; if however he was enumerated as an immigrant in 1911 his subsequent departure is equivalent to an unrecorded death. Similarly a man who both emigrates and returns during the decade does not affect the calculations, but if an emigrant enumerated in 1911 returns during the decade his arrival is equivalent to an unrecorded birth in the district.

The third assumption therefore affects the accuracy of the result in districts in which the immigrants and emigrants recorded in 1911 were largely temporary migrants and have since returned to their homes.

Having analysed the effect of the assumptions on which they are based we can now examine the results. At the head of the table are districts in which either (1) the deaths have not been fully registered, or (2) immigrants in 1911 have since returned to their homes. Amongst the districts at the head of the list are Attock, Lyallpur, Jhelum, Gurdaspur, Jhang, Sialkot and Muzaffargarh in all of which the balance of migration has been away from the district and probably several immigrants recorded in 1911 have since left them; in these our third assumption has probably resulted in magnifying the correction which

is necessary in the recorded deaths. Amongst the districts at the foot of the list Ferozepore, Lahore and Montgomery are districts which have been gaining by migration and to which no doubt many old emigrants have returned, in them the correction to be applied to the number of births on record has probably been exaggerated.

On the whole our-third assumption has tended to enhance the corrections which the figures show to be necessary; yet, even as they stand, these corrections show that remarkably little error exists in the vital statistics; in only five districts out of twenty-five does the error exceed ten per cent. It has always been recognised that vital statistics are inaccurate but I have been unable to find records of any attempt to gauge the extent of the inaccuracy, I believe that this attempt establishes the fact that the vital statistics are far less erroneous than their most friendly critics have imagined.

Having, I hope, proved that the method employed does not lead to violent errors and also that the majority of the vital statistics are very close to the truth, I must give some reasons to account for the exceptional cases of Montgomery, Shahpur and Simla. In the last case this is easy for more than two-thirds of the population of this district is urban and almost entirely consists of periodic or occasional visitors; this district forms an example of the fictitious case, mentioned early in this paragraph, of an area in which the vital statistics refer to persons who were present in the district at neither census.

In Montgomery the immigrants constituted 11 per cent. of the total population in 1911 and no less than 20 per cent. in 1921; in Shahpur the immigrant proportion of the total population dropped from 21 per cent. to 11 per cent. in the decade; where the stream of migration is so great as this any assumption concerning it must lead to appreciable error and in these two districts, at least, I abandon reliance on the accuracy of the conclusions I have drawn. The existence of these exceptions renders it necessary to indicate the districts in which violent fluctuations in the proportion of immigrants at the two censuses most affect the results; this is done by the inset table in which I have tried to place those districts for which the results must be least reliable at the top. Except in the first three districts the fluctuations have been insufficient to affect the results materially, whilst the figures in the lower part of the table show how very constant the stream of migration must be throughout the greater part of the province and therefore support the conclusion that the results are little affected by the second assumption on which they were based.

IMMIGRANTS AND EMIGRANTS EXPRESSED AS PERCENTAGES OF THE TOTAL POPULATION.

District.	*Immigrants.*		*Emigrants.*	
	1911.	1921.	1911.	1921.
Simla	47	31	35	28
Shahpur	21	11	5	5
Montgomery	11	20	20	15
Hissar	17	12	4	7
Gujrat	4	7	15	12
Jhelum	7	5	12	16
Ferozepore	21	19	14	12
Rawalpindi	13	15	9	8
Ambala	17	15	19	19
Jhang	5	4	16	14
Sialkot	8	7	25	27
Amritsar	12	11	22	26
Karnal	13	12	11	10
Kangra	5	4	6	7
Attock	4	3	6	6
Muzaffargarh	5	4	4	4
Jullundur	11	11	22	26
Ludhiana	16	16	24	20
Hoshiarpur	7	7	18	20
Lahore	21	21	12	13
Gurdaspur	9	9	19	19
Multan	11	11	5	5
Mianwali	4	4	7	7
Dera Ghazi Khan	3	3	4	4

Before leaving this subject it is perhaps necessary to meet an argument by which the whole method might be attacked, which is that the discrepancy between vital statistics and census results has been assumed to be due to errors in the former rather than in the latter. My reply to this is that census figures for total population are subject to very little error; those for immigrants and emigrants are however affected by birth-places being incorrectly recorded, for instance an immigrant father may give his own birth-place for every member of his family forgetting that some members were born after his immigration; the error therefore is limited to one of the four figures for immigrants and for emigrants of 1911 and of 1921. Using the same method, but assuming that the vital statistics are correct, we find that the error in Attock would be any one

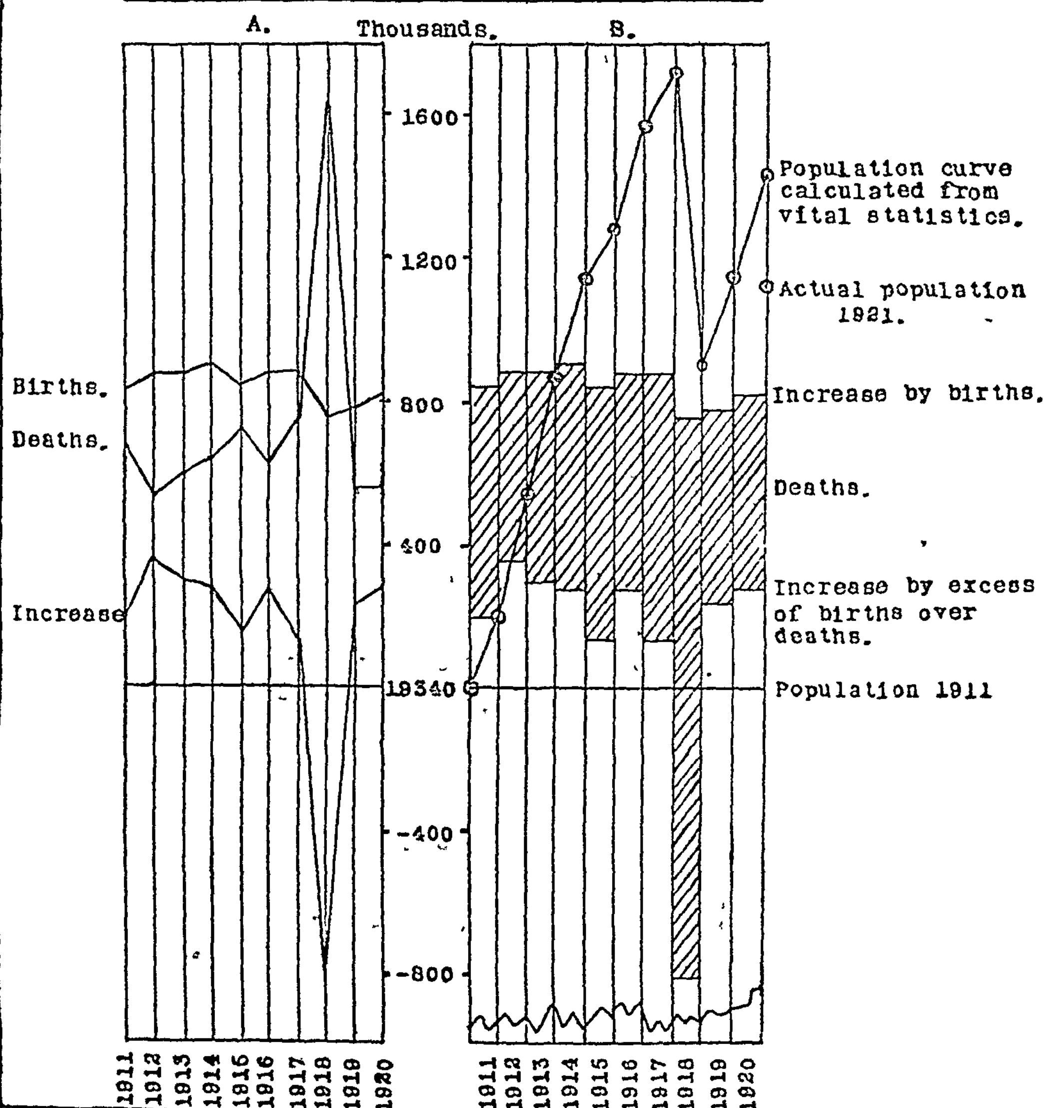
of the following :—

(1) Immigrants of 1921 should be 46,065 instead of 16,830.
(2) Emigrants of 1921 should be 495 instead of 29,732.
(3) Immigrants of 1911 should be 51,078 instead of 19,446.
(4) Emigrants of 1911 should be—3,516 instead of 28,116.

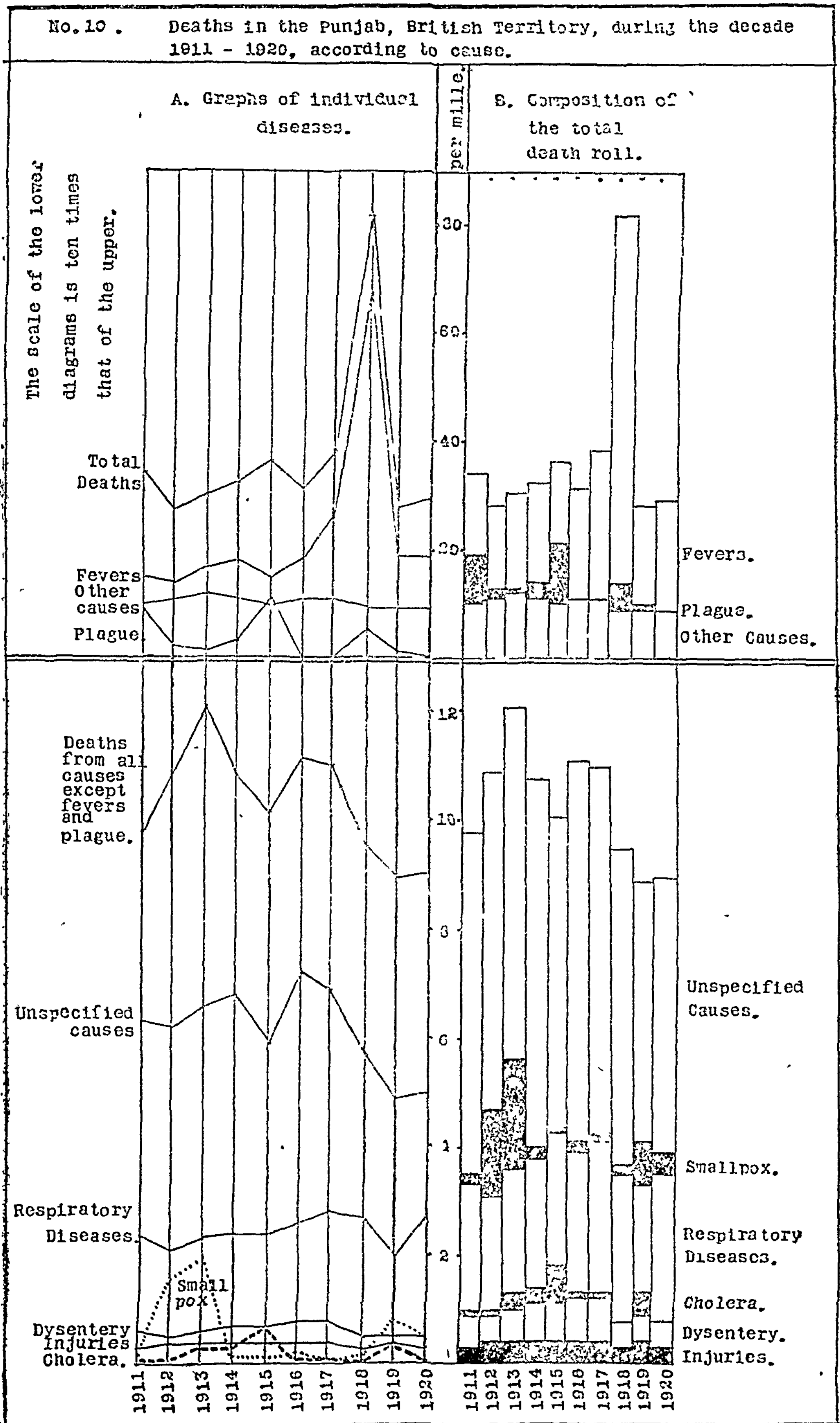
All these errors are far beyond the bounds of possibility, hence it is reasonable to assume that the comparatively small correction in the vital statistics is the one to be adopted. Similarly in all other districts it will be found that there is either a small error in the vital statistics or an impossibly large error in the census figures, and hence it is entirely justifiable to use the census figures as a check on the vital statistics but not to invert the process.

blic Health. 26. Except for the devastating epidemic of influenza which swept over India in 1918 and caused the largest number of deaths which have ever occurred in the Punjab in one year since any record of vital statistics has been maintained, the health of the province maintained a high general level throughout the decade.

Compared with other provinces in India both the birth-rate and the death-rate of the Punjab are high; in 1916, 1919 and 1920 the Punjab showed the highest birth-rate in any of the ten large reporting provinces in India; in 1911, 1914 and 1915 the Punjab birth-rate was only exceeded by that of the Central Provinces, whilst in the remaining four years of the decade only the United Provinces and the Central Provinces showed higher birth-rates. In 1915 the Punjab was unfortunate in showing the highest death-rate in India, and in 1917 Bombay was the only province returning a higher death-rate; in the other eight years the Punjab has stood third on the list three times, fourth twice and seventh twice, whilst in 1920 it took ninth place.



In reading the following brief account of the health conditions of the decade, great assistance will be found from reference to diagrams numbers 9, 10 and 11 which will be found to illustrate the characteristics of the years in a way which enables each to be regarded in association with the others :—



1911 was described at the time as an exceptionally healthy year except for the occurrence of plague, which disease contributed 8·9 to the death-rate of the year. The healthiness was mainly due to a defective monsoon which resulted in a freedom from fever which only contributed 15·3 to the death-rate and was lighter than in any previous year since 1887. There was an outbreak of cholera in the Sialkot District, but though severe for a time it was not of sufficient extent to affect the death-rate of the province to any appreciable degree. A glance at the diagram shows that the birth-rate of this year was exceeded five times in the decade and that in six subsequent years the death-rate was lower; yet at the time the birth and death-rates were described as high and low respectively, showing at once how much more favourable the conditions of health were in this decade than the last.

1912, described as the healthiest year since 1886, quite eclipsed the previous year in the brightness of its vital statistics; another weak monsoon resulted in an even further decline in the death-rate from fever, plague abated and there were no epidemics except one of small-pox. The total death-rate of 26·6 was the lowest for many years and was accompanied by the very high birth-rate of 45·3, due probably to the effect of three consecutive healthy years on the fertility of the population.

1913 started with a legacy from the previous year in the shape of small-pox, and this disease continued till the middle of the year causing a greater mortality than it had done for seventeen years previously; in February it accounted for 8,551 deaths, the highest number ever recorded from it in a single month. An early and weak monsoon produced conditions unfavourable to the spread of plague which showed a mildness unknown for many years; the conditions were also unfavourable to fever, and though fevers accounted for more deaths than in the two previous years they could not be termed severe. The death-rate rose to 30·2, the birth-rate just exceeded that of 1912 being 45·4 which was the highest recorded in the province since 1900.

1914 proved to be yet another healthy year; the continued sequence of these had a cumulative effect on the birth-rate in each year and in this year it rose to 46·3, the highest for any year in the decade; this rate had been exceeded only once since 1878, namely in 1899. This year marked the end of a series of years in which the fertility of the people gradually recovered after the prejudicial effect of the great malaria epidemic of 1908. In this year the mortality from both fevers and plague increased, and though neither of these were heavy they showed an appreciable effect on the total death-rate which rose to 32·0.

1915 was a bad year in comparison with those preceding it; heavy rain in March and April delayed the hot weather and produced conditions favourable to the flea, the chief disseminator of plague, and a severe epidemic of this disease resulted; in respect of other diseases the year was a healthy one. The total death-rate rose, entirely on account of plague, to 36·3 and at the same time the birth-rate dropped to 43·6.

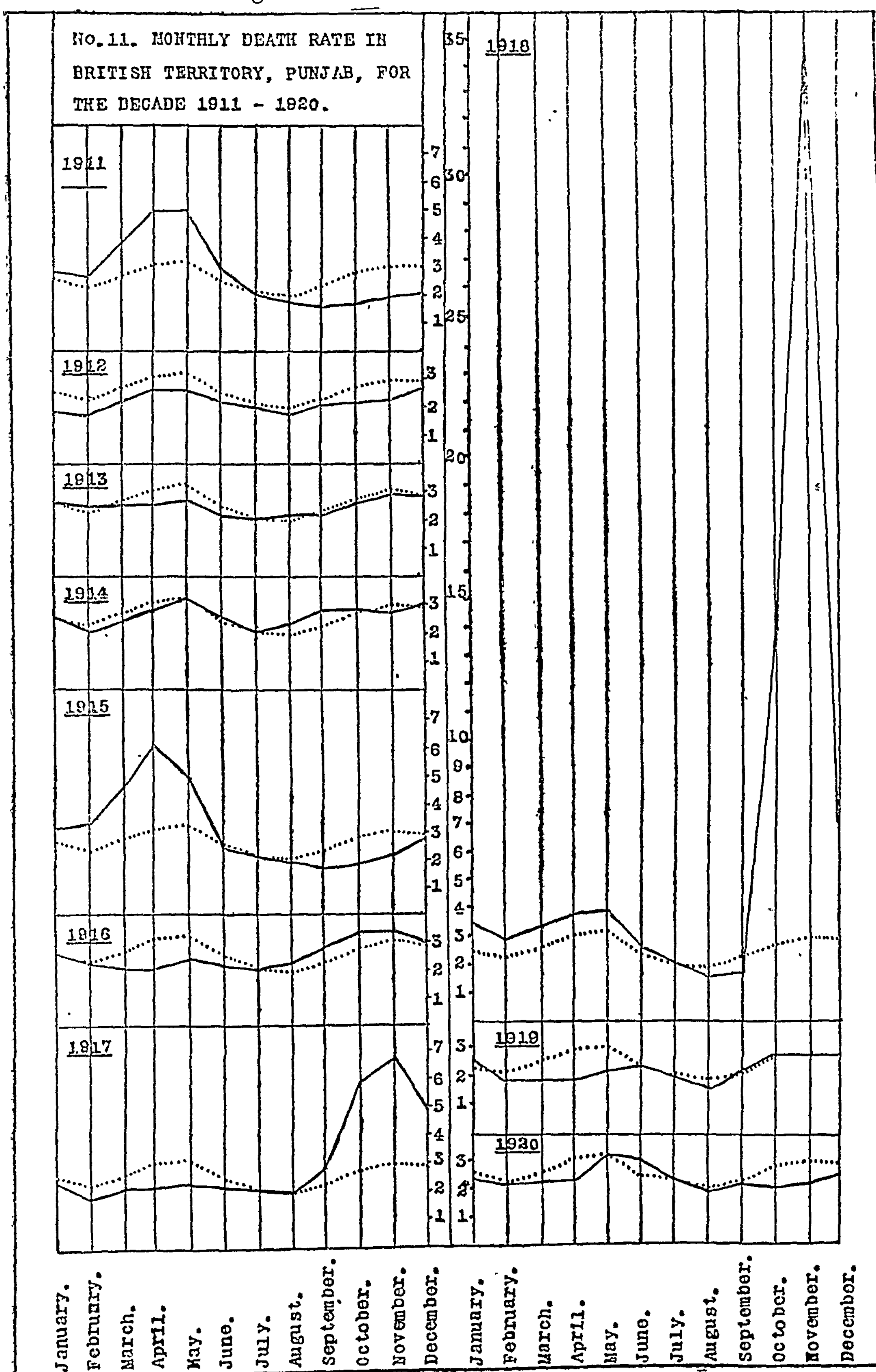
In 1916 a heavy and prolonged monsoon caused an increase in malaria, and more than half the deaths of the year were caused by fevers. In other respects however the year was a bright one; plague was less than it had ever been in the Punjab since it first made its appearance in the province, in fact in July the province was declared to be free of plague for the first time for twenty years. The total death-rate dropped to 30·7 and the birth-rate rose to 45·6 being the highest recorded in any province in India.

In 1917 heavy rainfall in April and May followed by a monsoon which gave much rain from June right on into October, produced conditions in which an epidemic of fever was inevitable; from September onwards malaria was rife and the epidemic was the worst since 1908. Plague on the other hand was very light and the year was the lightest small-pox year on record. The birth-rate reached practically the same figure as in the previous year, but the death-rate rose owing to the fever epidemic to 37·9.

The first nine months of 1918 shewed little indication of the dreadful visitation of disease and death which swept the province in the closing months of the year. Plague was severe in March and April, but otherwise all diseases were less active than usual; it is true that two epidemics of influenza appeared in August and September, the first in Lahore, Simla and Amritsar, and the second universally spread over the province from Gurgaon to Attock; but the influenza was of a mild form and caused inconvenience but no alarm, in fact the death-rates in

these two months were the lowest during the year. But in October influenza of a most malignant type spread over the whole countryside, and the death-rate for the month leapt up to 13·9 per *mille* against a normal average of 2·8 ; in the next month it increased to the staggering figure of 34·2 and in December declined to 7·0 against a normal average of 2·9.

The next paragraph deals with this outbreak of malignant influenza and in this review of the years of the decade suffice it to say that the death-rate for the year rose to 81·0 whilst the birth-rate dropped down to 39·6 ; population which, according to vital statistics had been increasing rapidly and steadily throughout the decade, now fell within the short space of three months to very little more than it had been at the end of 1913 five years previously. Though the outbreak lasted but three months, the death-rate for the year rose to the highest figure on record, and that for November to a figure incomparably higher than had ever been recorded before in a single month.



1919 proved to be a very healthy year; small epidemics of cholera and small-pox formed unpleasant features but did not prevent the death-rate from dropping to the lowest on record since 1912. A very short-lived monsoon resulted in little fever, and plague was light. The low death-rate was mainly the result of the absence of fever and plague, but it is a matter of speculation how far that absence was due to the weeding out of the weaklings by the awful mortality of the previous year.

There was no recrudescence of the influenza though a few cases were reported and caused anxiety to the medical authorities, but the disease left its mark upon the year in the shape of an exceptionally low birth-rate. It is noteworthy however that the low birth-rate of 40·3 returned in the Punjab was yet the highest returned by any province in India; and that the death-rate of 28·3 was exceeded by eight out of the other nine large provinces; which two facts illustrate the marvellous recuperative powers of the population.

1920 was again a healthy year; there was little rain except for some unusual falls in May and there was little fever. The Punjab again took pride of place in India in respect of its birth-rate of 42·9, which, though low, was considerably in excess of that of the preceding twelve months; and again its death-rate of 28·6 was exceeded by six other provinces.

To sum up, the decade may be described as an exceptionally healthy one with the exception of the one appalling outbreak of influenza in 1918; in a series of particularly good years 1915 and 1917 stand out as less healthy than the rest owing to epidemics of plague and fever respectively. This series of good years has resulted in a high birth-rate, which however was brought down with a rush in 1918 and has not yet reached its former level though it has improved in each of the subsequent years.

At the end of the decade there were most cheering signs of a rapid recovery after the desolating events of 1918; the death-rate was exceptionally low and though the birth-rate was naturally at a low ebb after the exceptional mortality amongst young adults in 1918 it was yet improving; both in respect of its birth-rate and death-rate the Punjab was comparing most favourably with other parts of India, and renewing its depleted population at a greater rate than any other province.

he ienza lemics 918.

27. Rumours of the existence of influenza in the Punjab arose in July of 1918, but no cases were definitely reported till August when the disease appeared in recognisable form in Simla, Lahore and Amritsar; the disease was then in a mild form with very low case mortality and caused no anxiety; it was more prevalent amongst Europeans than Indians. This light epidemic died out and was succeeded by a second in September which was of much greater extent and spread throughout the length and breadth of the Punjab; but it too was of a mild variety and caused few deaths. The mild form of the disease in both epidemics is illustrated by the fact that the death-rates in August and September were lower than the average for those months and were less than in any other months of the year.

In October the disease appeared for the third time; it was now in a malignant form and was allied with a very fatal type of pneumonia; by the middle of the month it had spread throughout the plains of the Punjab and reached the hill districts soon after. It appears to have been spread mainly by returning military units, post office and railway employees and general travellers; the infection was extremely rapid, the period of incubation being rather less than two days.

From the middle of October to the middle of November the state of the province beggars description. Hospitals were choked, dead and dying lay by the sides of the roads, burial grounds and burning ghats were strained beyond their capacity and corpses lay awaiting burial and cremation. Terror and confusion reigned supreme, the postal and telegraph services were disorganised, and a harassed and depleted medical service struggled valiantly but ineffectually to cope with the disease. During this period large numbers of the educated classes earned the gratitude of the sufferers by devoted self-sacrifice and social service, whilst medical students throughout the province rendered every assistance within their power.

The disease proved especially fatal to young adults including women of child-bearing age, and was said to single out pregnant women more than others. It was capable of treatment, and even elementary knowledge of simple rules of

health would have rendered it far less disastrous ; as far as can be ascertained the case mortality was rather under five per cent. amongst Europeans, about six per cent. among Indians of the higher classes who were able to obtain medical attention, and anything over fifty per cent. amongst the Indians of the countryside who had no knowledge of the treatment to be adopted and could not obtain medical aid. In towns though the medical staff could not attend all cases, they were able to do a great deal more than in rural tracts by the publication of advice as to simple precautions and expedients, with the result that the mortality in urban areas was only 36 per *mille* as against 51 per *mille* in rural areas.

During the first five years of age males were more subject to attack than females, but above this age the mortality amongst females was much in excess of that amongst males ; the greatest mortality was amongst persons of 15 years of age and upwards each succeeding age group after this showing a greater death-rate from the disease than that below it. This is clearly shown by the marginal figures which show the death-rate for each group amongst both males and females.

Age.	*Death-rate per mille.*	
	Males.	Females.
Under 1 ..	30·36	27·47
1—5 ..	37·05	36·82
5—10 ..	25·22	29·53
10—15 ..	28 42	40·91
15—20 ..	43·50	59·67
20—30 ..	47·46	59·10
30—40 ..	50·22	63 01
40—50 ..	52·72	60·30
50—60 ..	66·68	80·16
60 and over ..	77·00	92·74
All ages ..	45·71	54 76

It must be noted that no separate returns of deaths by influenza were prepared at reporting stations; in its various phases the malignant type resembled sometimes pneumonic plague and sometimes relapsing fever; it was almost invariably returned under the head of fevers, and separate figures for it have been compiled by the medical authorities by deducting the normal number of deaths in each month from the total recorded during the epidemic ; this method was no doubt rough and was more likely to result in minimising the number of deaths than in exaggerating it for it is probable that during the epidemic the mortality from other fevers was less than the normal for the time of year. It is, however, not from misclassification so much as from failure of the registration system that we may expect errors to exist in the returns prepared for influenza ; with the countryside being devastated by the scourge it must have been impossible for village *chaukidars* to give in accurate reports of the number of deaths ; it is extremely probable that a great deal of the mortality never found its way on to the death registers, and that the vital statistics grossly underestimate the number of deaths caused by the epidemic. As far as the statistics can be trusted, the incidence of the death rate in the different districts of the province is given below—

Death-rate from influenza by districts.

Gurgaon	123·1	Amritsar	42·2
Rohtak	96·2	Muzaffargarh	41·6
Ludhiana	77·4	Lyallpur	41·2
Hissar	67·2	Mianwali	41·1
Montgomery	65·4	Jullundur	40·3
Karnal	60·8	Gujrat	39·8
Ferozepore	57·5	Shahpur	36·5
Lahore	56·0	Jhelum	35·1
Multan	53·9	Attock	32·0
Dera Ghazi Khan	53·5	Sialkot	29·3
Gujranwala	46·4	Hoshiarpur	26·0
Gurdaspur	45·7	Rawalpindi	25·9
Ambala	44·9	Simla	23·9
Jhang	44·5	Kangra	22·9

The mortality was heaviest in the south-east of the province, but there is some doubt as to the figures for Gurgaon as in that district there was an epidemic of relapsing fever going on concurrently with the influenza and it was impossible to separate the figures for the two ; the hill districts were affected least, and it may be noted that it was in these that the epidemic appeared and disappeared latest.

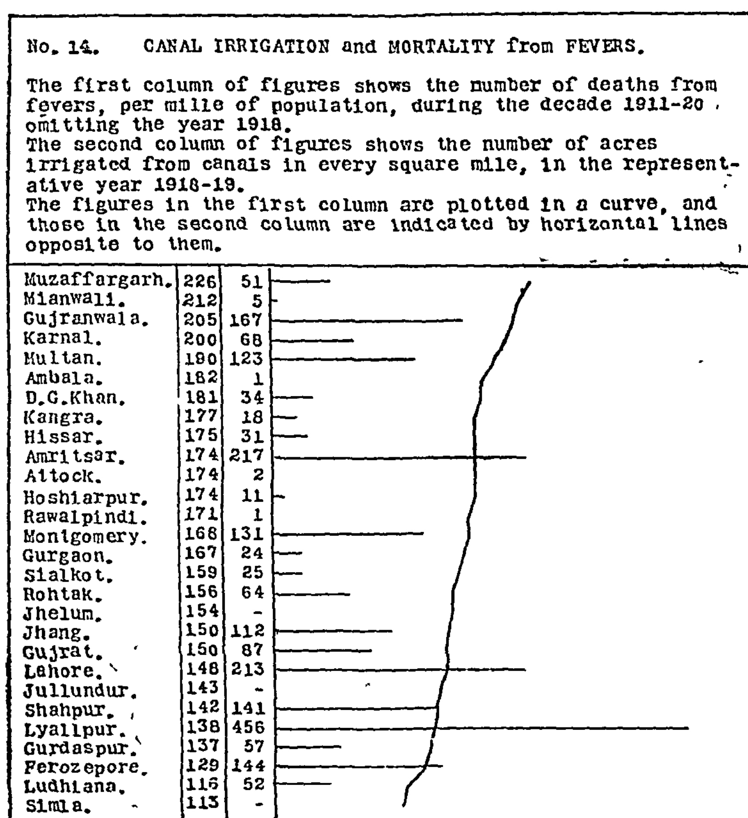
By the end of November the influenza was rapidly disappearing in the plains, but it was nearly a month later before the hill districts were free. Though the epidemic died out as quickly as it appeared, and did not recur in the last two years of the decade, it left behind it a population depleted of its young adults and its effect on the birth-rate will probably be traceable well into the next decade.

The diagrams which illustrate the preceding paragraph show far more clearly the effect of the epidemic than any description can do; note for instance the enormous rise in the death-rate of 1918 and the sudden drop in population in the midst of a period of continuous and rapid increase as shown by diagrams 9 and 10; and, more striking than all, note the course of the death-rate by months over the whole decade as shown in diagram number 11.

nnection een irriga- and ality fever.

28. It has often been said that the spread of canal irrigation is accompanied by a deterioration in the health of the people, due to the conditions of canal-irrigated tracts being favourable for the production of malaria. In paragraph 62 of the 1911 Census Report this drawback of canal irrigation was made the subject of comment, and a diagram was inserted to show the connection between it and fever mortality; in examining that diagram I have failed to see that it supports the theory that it is said to illustrate.

The theory is an important one and I have gone into the available statistics in great detail, but can find nothing in support of it; it is however so widely accepted, that I insert a diagram illustrating one of the many ways in which I have attempted to test it. The basis for the fever mortality figures in this diagram are those for rural tracts only, and by omitting the figures for 1918 from the totals of the decade I have eliminated the influenza epidemic, which spread without any relation to irrigation; separate figures for malaria are not available but it constitutes the principal disease amongst those tabulated as fevers. For irrigation figures I have chosen those given in the Season and Crop Report for 1918-19 as they appear to be representative for the decade as a whole.


No. 14. CANAL IRRIGATION and MORTALITY from FEVERS.

The first column of figures shows the number of deaths from fevers, per mille of population, during the decade 1911-20, omitting the year 1918.
The second column of figures shows the number of acres irrigated from canals in every square mile, in the representative year 1918-19.
The figures in the first column are plotted in a curve, and those in the second column are indicated by horizontal lines opposite to them.

Muzaffargarh.	226	51
Mianwali.	212	5
Gujranwala.	205	167
Karnal.	200	68
Multan.	190	123
Ambala.	182	1
D.G.Khan.	181	34
Kangra.	177	18
Hissar.	175	31
Amritsar.	174	217
Attock.	174	2
Hoshiarpur.	174	11
Rawalpindi.	171	1
Montgomery.	168	131
Gurgaon.	167	24
Sialkot.	159	25
Rohtak.	156	64
Jhelum.	154	-
Jhang.	150	112
Gujrat.	150	87
Lahore.	148	213
Jullundur.	143	-
Shahpur.	142	141
Lyallpur.	138	456
Gurdaspur.	137	57
Ferozepore.	129	144
Ludhiana.	116	52
Simla.	113	-

The diagram shows at a glance that there is no obvious connection between canal irrigation and fever; six widely irrigated districts have a very low fever death-rate, the most widely irrigated of all is exceptionally free from fever. Only two widely irrigated districts have high fever mortality, whilst two more have a mortality close to that for the province as a whole. Mianwali and Ambala, with practically no canal irrigation, suffer severely from fever; Lahore, Shahpur, Lyallpur and Ferozepore with widespread canal systems are remarkably free.

Moreover in those irrigated districts which do suffer severely from fever there are special causes for its prevalence, which, though they arise from canal irrigation, are not necessary concomitants of it; these districts are, Gujranwala, Karnal, Multan and Amritsar.

In Gujranwala, Karnal and Amritsar the presence of water-logging has long been recognised as inimical to health and its eradication has been the subject of much thought and endeavour; in Multan, surrounded by rivers, there is a very large area of irrigation by inundation, which leaves water lying on the surface far longer than irrigation from perennial canals. If these four districts were omitted from the diagram, the majority of irrigated districts would be left congregated at the bottom of it, almost indicating that canal irrigation is beneficial in combating fever; but I certainly do not put this forward as a theory and I limit my conclusions to the negative assertion that statistics show no connection between fever and canal irrigation except when accompanied by water-logging.

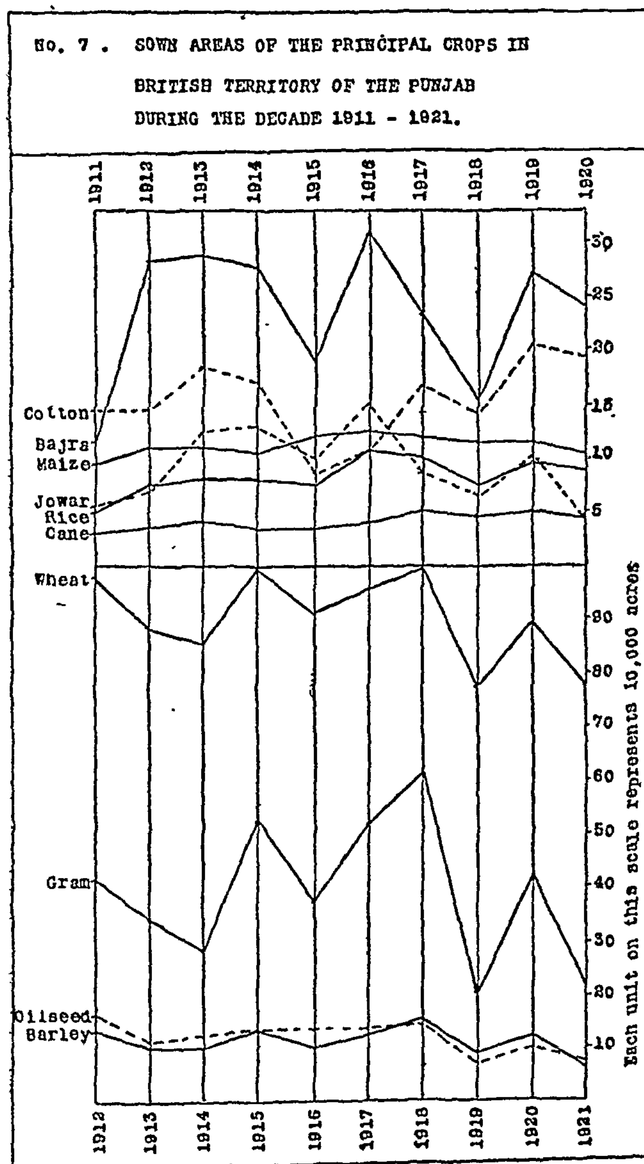
The introduction of canals may lead to an increase of fever, but does not bring an increase sufficient to render the tract more liable to fever than tracts where canals are unnecessary.

Agricultural Conditions of the Decade.

29. The following statement in which sown and matured areas are shown as percentages of the average sown and matured areas for the decade and failed areas as percentages of the sown areas, gives a rough idea of the nature of each harvest and the result on the total produce for each year of the decade.

This statement together with diagrams numbers 7 and 8 which illustrate this paragraph should be referred to as the note on each of the years of the decade is read and will then be found to reflect most of the characteristics of those years. The scales of the two diagrams should be carefully noted, otherwise they will give a wrong idea of the relative importance of spring and autumn crops; for in order to show the variations in the latter, they have had to be shown on a much larger scale than the spring crops.

Year.	Kharif.		Rabi.		Total.
	Sown.	Failed.	Sown.	Failed.	Matured.
1911-12	69	31	111	14	93
1912-13	106	24	94	13	99
1913-14	111	24	90	10	99
1914-15	112	18	115	7	122
1915-16	81	27	100	24	84
1916-17	118	10	111	16	119
1917-18	111	19	122	11	123
1918-19	78	41	79	10	74
1919-20	110	17	101	10	110
1920-21	104	36	78	25	75



The decade opened disastrously; there were no early rains in 1911 and kharif sowings were very much restricted in consequence and covered a smaller area than in any other year of the ten; this was in one way fortunate for an intense drought which lasted from the middle of June till the latter end of August caused very heavy failure.

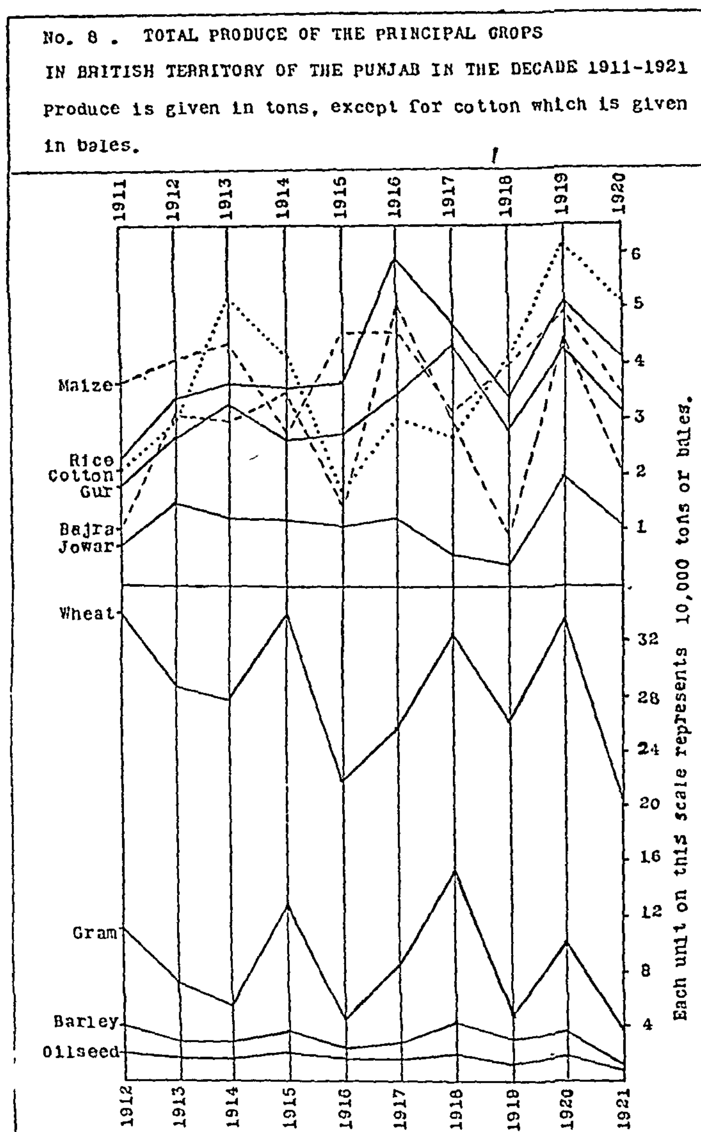
The canals stood the strain upon them very well, but irrigation on their lower reaches was scanty; and the water in the rivers was so low that many inundation canals failed to function at all; in freely providing water for fodder crops the Government canals did good work and saved the lives of thousands of cattle, for fodder scarcity was acute.

Most unusually heavy falls of rains occurred on October 26th and continued for some four weeks, entirely changing the agricultural outlook and enabling the people to attempt to recoup

their losses by sowing spring crops on a larger area than usual. A wet January raised hopes of a record spring harvest, but extreme dryness in the next two months dashed these hopes; showers in April saved the wilting crops and the resulting harvest was well above normal.

The result of the miserable kharif and good rabi was a total of matured crops for the year only 7 per cent. below average.

1912-13. A wet April assisted the sowing of cane and cotton; a weak and fitful monsoon which arrived rather late and ceased earlier than usual, was not favourable to kharif crops, but nevertheless the sown area was above average. Irrigated cotton did particularly well, as it usually does in years of little rain, and the season also proved favourable for cane; other kharif crops though showing a marked improvement over the previous year were not good; failure amongst bajra and jowar was extensive and led to a scarcity of fodder in the ensuing cold weather.



The early cessation of the monsoon led to reduced rabi sowings, and an exceptionally dry October and November created rather a gloomy outlook, but later on there were plenty of showers and an average crop resulted.

1913-14 was another normal year without specially marked characteristics; the early part of the year was wet and led to increased kharif sowings, cotton and jowar were both sown in much larger quantities than usual. The early part of the monsoon produced copious precipitation but August was an exceptionally dry month and the monsoon withdrew completely in September. Cotton and cane did remarkably well, but jowar and bajra failed badly; the harvest was in general good in the west but poor to bad in the south-east; this accounts for the low outturn of jowar and bajra which are more extensively grown in the south-east than elsewhere; their failure again led to cold weather fodder scarcity in this part of the province. In spite of the early cessation of the monsoon, which interfered with the working of inundation canals, the heavy rains before August left the ground so moist that in the west the rabi sowings were in excess; but elsewhere they were restricted and the sown areas and produce of the spring staples fell off considerably.

The year 1914-15 was marked by an early monsoon which gave excessive rain in July and again in the latter part of September, but suffered a prolonged break in August. Sown areas were again above the average but there was a

decline in cane and cotton as the ground was dry at the time these two crops had to be put down, whilst the low price of cotton in the previous year also tended to prevent wide sowings. The heavy rain in July did much damage to maize, the out-turn of which was poor; the south-east part of the province suffered most from the August break and once again the jowar crop was a bad one; bajra which was more advanced at the time of the break did not suffer and did better than in the previous year. On the whole the kharif crop was more successful than in the preceding year, but maize, cotton and sugar were produced in much smaller quantities.

Early winter rains combined with the moisture in the soil from the down-pours of September encouraged wide rabi sowings; more rain than usual in February and March were favourable to the crops, and, except for rather unsettled weather at harvest time, the season was particularly good and resulted in the largest sown and matured areas ever recorded; a noticeable feature of the season was the enormous rise in the production of gram, this due to the fact that extension of sowings are almost always in unirrigated lands as the cultivation of irrigated lands is not subject to much fluctuation.

Two fair years and a good one had placed the farming community in a strong position when 1915-16 opened, and it was fortunate that this was so for it turned out to be a trying year with two bad harvests.

The country was dry at the time of kharif sowings and very small areas were brought under cultivation in unirrigated tracts; a scanty and ill-distributed monsoon, which was 41 per cent. in defect in the aggregate, caused widespread failure amongst all crops; the Himalayan and Sub-Himalayan tracts however escaped the general misfortune; all crops except maize showed a great falling off in sowings, and all except rice, maize and sugar faired badly and produced little, the three exceptions being crops which are most widely grown in the two tracts which escaped the general failure of the monsoon. Cotton sowings were restricted even more than others, the continued low price caused by war conditions prejudicing this crop.

A thoroughly bad kharif did not destroy the optimism of the farmers, and, in spite of the bad monsoon, two periods of rain in September enabled them to sow rabi crops almost up to the normal extent. The sub-soil water was low, rivers were low and canals were running under difficulties; all depended on the winter rain and this proved to be very scanty with the result that failure was very heavy, practically one-quarter of the sown area failing to mature at all whilst the outturns on the matured areas were unusually poor.

The year was a trying one, but the peasantry stood it well thanks to their prosperous condition when it opened; in the south-east, which had failed to participate to the full in the good fortune of the previous three years, the pinch was felt most and some slight distress made itself felt.

Conditions looked gloomy when 1916-17 opened, but some rain in June improved matters and helped cotton and cane sowing. The monsoon started in the latter half of July and gave very heavy precipitation throughout August; it slackened off again in September and finished up by giving very heavy rain in the beginning of October; it was very much more heavy and prolonged than usual. Kharif sowings leapt pu, maize which had been widely sown the previous year showing less increase than others, and cotton also did not share to the full in the extension. The heavy rains proved beneficial to the kharif crops, but were rather too heavy for jowar whilst the cotton crop was a very variable one; in the result excellent yields were given by all crops except jowar, and all except this and maize and cotton showed a very much greater production than in the previous year; this undoubtedly proved the best autumn cropping season in the decade. The heavy monsoon left conditions excellent for the rabi sowings, which did not fall far short of the records of 1914-15; all rabi crops shared in the widely extended sowings, particularly gram; yields were good, but that of wheat was moderate and the total produce of this crop did not show so much increase as might have been hoped from the extension in sowing.

The year which followed, 1917-18, was a curious one full of contradictory features. The early spring was dry but rains in April and May led to an extension of cotton and cane sowings; the monsoon started on the 2nd June and was continually active till it withdrew on the 25th September; its early start, and its extreme violence caused floods and prevented kharif sowings, and the area

under all crops except cane and cotton fell considerably. The season was one of such continuous rain that all crops except cane suffered more or less severely, and the produce of all except this one crop fell.

The continuous rain gave no opportunity for careful tillage before the rabi sowings, but the moisture in the ground was so excessive that a large area of very hastily prepared land was sown and the total area under crops was far in excess of that in any other year in the decade ; a dry winter did no harm and the amount of failure was small, hence the matured area for the crop was very far above normal—so much so that in spite of the poor kharif the cropped area of the year was a record beating even that of 1914-15. Yields however were not good, due partly to the fact that the heavy monsoon and its accompaniment of a severe epidemic of malaria prevented careful preparation of the ground and also the usual attention which is paid to the growing crops. As regards total produce the year was most disappointing ; all kharif crops except cane showed a marked decline, and though the produce of rabi crops was far above normal only those of gram and barley exceeded the figures registered in 1915 and again in 1920, in both of which years the matured area was less than in this year. On the whole the year was good but disappointing, huge areas of matured crops producing yields of very moderate amount.

1918-19, the black year for India owing to the wave of disease which swept the country at the end of 1918, was also a black year agriculturally for the Punjab. Light rains in March and April assisted the sowing of cane and cotton, but the areas did not reach those of the previous year. The monsoon gave no rain except fitful showers in June and was much in defect throughout July; it improved during the first half of August and then gradually withdrew completely ceasing at the beginning of September, and altogether it only gave half the normal rainfall. As a result of the drought kharif sowings were very much restricted and the sown crops suffered badly, the produce of all crops except cotton fell off very markedly, that of bajra being particularly low. October and November were hot and dry, rivers were low, inundation canals started running late and left off early, and even the perennial canals carried much less than the usual supply ; conditions were thus most unfavourable for rabi sowings and the influenza epidemic still further restricted them so that the sown area dropped to only 79 per cent. of its average for the decade, but as the major portion of this area was irrigated there was not a great deal of failure except in the south-east of the province.

Both harvests were very poor, the kharif approximating to the wretched one of 1911 whilst the rabi was the worst, except for that of 1921, in the whole decade ; the matured area for both harvests together was the lowest recorded during the decade. The only crops which did not do badly were cane, cotton and maize, most of which were either irrigated or grown in the Himalayan and Sub-Himalayan tracts which were not quite so rainless as the rest of the province.

By the end of the year the agricultural community in the Ambala Division and in the Dera Ghazi Khan District were reported to be suffering from the adverse conditions ; cattle had suffered throughout the province ; war conditions and a closure of goods traffic owing to railway strikes still further affected the situation and there were few breaks in the general gloomy outlook. Prices were high owing to the reduced cropping and an increased demand for export, but there was insufficient surplus grain for this to benefit the smaller proprietors.

In 1919-20 the monsoon gave heavy rain for two months commencing in the middle of July, and there was showery weather both before and after it. October and November were unfortunately dry and restricted the rabi sowings, but all sown areas of both seasons showed large increases over the preceding year though they were not abnormally high ; failure was lighter than usual and the yields were very much better.

Excessive heat in the early summer melted the snows rapidly and the monsoon, though short, was heavy ; the rivers therefore ran at a high level and the inundation canals had full supplies.

The figures for area indicate a good year not far above normal, but reference to diagram number 8 shows that the ultimate produce of both harvests was exceptionally good ; probably this was the best year of the decennium though



the figures for area disguise the fact and point to 1914-15, 1916-17 and 1917-18 being better.

1920-21 marked a return to the agricultural conditions of 1918-19, rain was lacking throughout the year and canals suffered from the lowness of the rivers. The monsoon set in late in June but was very weak except in the south-east and in the Himalayan and Sub-Himalayan tracts; throughout the next three months it was greatly in defect and it was followed by a rainless autumn.

The kharif sowings were not restricted as much as might have been expected, but failure was very heavy; the rabi sowings were the lowest recorded for over ten years and the small area sown had a higher percentage of failure than in any other year. The rabi crop was the poorest recorded for many years and the kharif was comparable with those of the bad years 1911, 1915 and 1918.

The year was one of mild distress; resort had to be made to suspensions and remissions of revenue and to the granting of concession carriage rates for fodder; famine test works were opened in Hissar, and, though they proved to be unnecessary, this fact marks a nearness to famine conditions which had long been unknown in the Punjab.

The decade since the last census thus consisted of four good years, three moderate ones and three bad ones; but it is useless to attempt to compare cropping and produce returns with those of former decades as cultivation in the Punjab has not yet attained a state of equlibrium and its constant extension renders the comparison of the results of years separated by any considerable period useless as a test of the conditions of such years.

The decade has been free from famine, and straitened conditions have only been experienced in the south-east which did not share equally with the rest of the province in the good years.

The diagrams attached to this paragraph do not indicate that the fluctuations in cropping are making any progressive change, all can be traced to the nature of the seasons and to temporary price conditions; no crops except cotton appear to be gaining at the expense of others, and even with cotton this tendency may be due to the fact that prices were low at the beginning of the decade and improved rapidly towards the end rather than to any permanent disposition to sow it more extensively.

Extension of Cultivation.

30. The figures for the year 1920-21, when compared with those for 1910 given in paragraph 22, show a decline of 17 per cent. in cultivated area associated with an increase of 30 per cent. in irrigated area, but examination of the figures for intermediate years shows that this comparison does not give a true indication of the changes which have occurred. The actual figures for each year of the decade, together with those which have already been given for 1900 and 1910, are shown in the inset table; they show that the comparison of figures recorded at ten year intervals is not a satisfactory gauge of progress; fluctuations from year to year totally eclipse progressive changes.

Year	*Areas in square miles.*					
	Irrigated from state canals.	Irrigated from private canals.	Irrigated from wells.	Irrigated from other sources.	Total area irrigated.	Gross cultivated area. (Sown area).
1900 ..	6,631	1,287	6,492	240	14,650	43,587
1910 ..	9,753	802	4,665	316	15,536	46,325
1911-12 ..	10,877	648	5,344	243	17,112	41,107
1912-13 ..	10,978	774	5,628	279	17,659	42,984
1913-14 ..	11,029	745	5,877	270	17,921	42,701
1914-15 ..	11,857	827	5,020	250	17,954	49,556
1915-16 ..	11,632	754	5,633	226	18,245	40,475
1916-17 ..	12,612	814	5,364	265	19,055	49,538
1917-18 ..	12,003	802	4,611	262	17,678	51,356
1918-19 ..	11,767	609	5,982	194	18,552	34,146
1919-20 ..	13,601	765	5,525	310	20,201	45,487
1920-21 ..	13,274	701	6,056	211	20,242	38,377
Decade ..	11,963	744	5,504	251	18,462	44,573

It is at once evident that years of favourable rainfall when the sown area is most extended are also years in which irrigation, and particularly that from wells, is restricted; and that well-irrigation is most widespread in dry years when the sown area is smallest; the years 1917-18, 1918-19 and 1920-21 indicate this very clearly. 1900 was a dry year and 1910 was one of good rainfall; the comparison of figures for those years tends to magnify the increase in cultivation and decrease in well-irrigation; this consideration supports the

assertion made in paragraph 22 that by the end of the decade 1901-11 cultivation was nearing its limit of extension rather than that labour was scarce.

If we examine the general trend of the figures throughout the last decade, rather than the figures for the first and last years, it is evident that irrigation from state canals has actually increased by 22 per cent. in the last ten years, that the irrigation from private canals and from wells has remained practically unchanged though varying from season to season, that irrigation from other sources shows a slight regular decrease, and that the total cultivated area does not show any regular extension sufficient to be traceable amidst the fluctuations due to seasonal differences.

During the decade the area irrigated from state canals has permanently increased by about 2,400 square miles without any corresponding increase in the cultivated area of the province; this striking fact is not due to the separation of Delhi with its small area of cultivation which is roughly about 350 square miles and is insufficient to affect the figures.

Upper Jhelum	539
Upper Chenab	940
Lower Bari Doab	1,332
	2,811

We have seen that by 1920-21 the three canals opened during the decade were irrigating 2,811 square miles and, as most of the irrigation from the Lower Bari Doab and some of that from the Upper Chenab is of land which was previously uncultivated, it is clear that the cultivated area in settled tracts has, on the whole, declined.

Each decade has shown a rapidly decreasing rate of extension of cultivation outside the areas rendered cultivable by new irrigation; in the last three decades this has been very marked and it is evident that the province has now reached a stage when it can expect no increase in the area under cultivation except by the opening of new canals or the adoption of a different system of agriculture.

Though practicable schemes for still further extending the canal systems of the province are in progress, the problem of conveying available water to available wastes is becoming more and more complicated; the time is already approaching when the whole of the cold weather supply in most of the great rivers will be used for irrigation; storage of the excess waters of the rainy season does not hold out a prospect of providing a means for extending irrigation at a rate bearing comparison with that of the last seventy years; even if all engineering difficulties are overcome the wastes suitable for cultivation under irrigation are not inexhaustible.

Of the three great obstacles to increase in population—war, pestilence and famine—the first was removed directly British Government was established, the last was gradually removed by the growth of communications and of an agricultural surplus, and the second will be reduced as knowledge of even the simplest rules of hygiene spreads amongst the people; all now depends on the maintenance of the agricultural surplus; its existence has depended on the extension of cultivation which in the past has been rendered possible, in cultivable areas, by settled conditions and, in uncultivable areas, by the construction of canals; the first possibility of extension has now been exhausted, the end of the second is in sight; the system of agriculture must be changed so as either to raise more produce from the present cultivated area or to bring under cultivation areas which are at present regarded as uncultivable.

'rices, ages and ricultural bt.

31. There is a very distinct difference between the prices realised by farmers at harvest time and the subsequent prices realised in the larger grain markets; the former reflect the nature of the seasons more, and the demand for export less, than the latter.

The following short account refers to harvest prices:—In 1911-12 the prices of all grains remained high, being assisted by a brisk demand for wheat for export, but that of cotton dropped considerably; in the next year cotton improved whilst wheat went still higher. In 1913-14 cotton and sugar, of which there had been good crops, declined in price; wheat rose slightly and the coarser food grains went up on account of scarcity.

1914-15 was an excellent year for the agricultural community; prices were high except for cotton which suffered owing to exports failing off on account of the war; jowar and bajra fetched high scarcity prices, but, as these are mainly grown for home consumption, this told rather against than for the Punjab peasant proprietor. The next year was one of poor crops and prices rose all

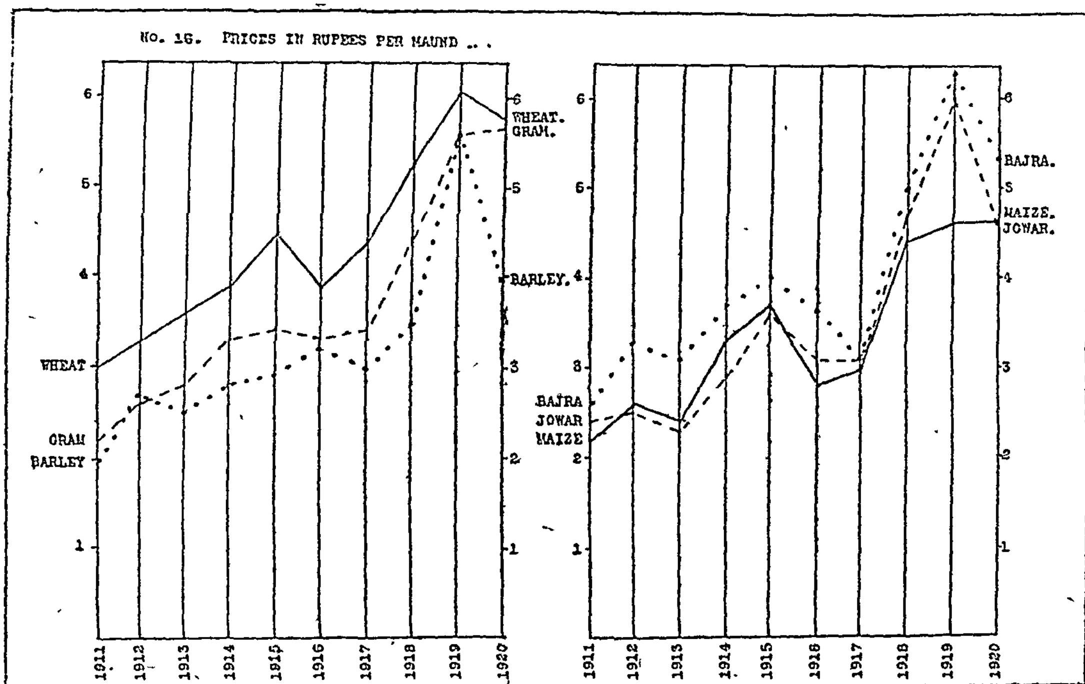
round, that of cotton rose briskly as a demand for export once more asserted itself; in this year complaints about the high wages demanded by agricultural labourers began to be heard and scarcity of labour was, perhaps for the first time, a real handicap to the farmer.

In 1916-17, with the return of good harvests, prices showed a tendency to drop all round, but cotton and wheat were not affected; the year was one which fully restored the position of the people which had been somewhat shaken in the previous year.

A general slight increase in prices occurred in 1917-18 but the outstanding feature of the year was the price of cotton which soared above anything previously known; the next year was marked by high prices caused by poor cropping and an increased demand for export, but there was insufficient surplus grain for this to benefit the smaller proprietors.

In 1919-20 excellent harvests following after a bad year resulted in a general drop in prices, but wages continued to rise rapidly; the bad harvests of 1920-21 forced up prices once more, and they attained the highest general level reached during the decade.

Turning from harvest prices to those obtaining in the principal grain markets of the province which are shown in diagram No. 16, we find a very rapid and practically continuous increase throughout the decade.



The outbreak of war in 1914 caused a sudden rise in prices at the end of that year and this continued the next year and was enhanced by a poor monsoon. In 1916 wheat exports were severely restricted, prices hitherto unknown creating a position of grave anxiety, and a big check ensued; in the following year exports were again restricted but military requirements necessitated a considerable export of wheat and gram and the prices of these two started to rise again. In 1918 and 1919 poor production combined with export for military purposes caused a further rise and in the latter year record prices were reached; in 1920 exports were still under control and good harvests resulted in an abatement of price.

How long the phenomenally high prices reached in the decade will continue after the adjustment of trade following the conclusion of the war it is impossible to foretell, but there is little prospect of prices ever falling to pre-war level and much of the rise must be permanent. The miserable crops harvested in the last year of the decade have since caused the unparalleled position in which India has had to import wheat from Australia and local prices have broken loose from the control afforded by export.

Regular wage censuses have been held in the province in 1909, 1912 and 1917; amongst other statistics available in the reports are the normal daily wages of urban labour in some of the principal cities and the normal daily wages of

rural labour in every district; it is difficult to estimate average wages obtaining in the province from these data but an attempt has been made as follows :—where the normal wages vary between two limits the mean of these has been taken for the unit concerned; in towns this has been multiplied by the number of people in the category concerned and the average worked out accordingly; in rural areas the average of district mean wages has been taken without any attempt to allow for the varying numbers of people concerned in each district. The results are probably of sufficient accuracy to allow comparison of the three sets of wages and have been incorporated in the table reproduced below :—

Class of labour.	Daily wages in annas.			Increase per cent.		Wages expressed in maunds of wheat per month.		
	1909.	1912.	1917.	1909-12.	1912-17.	1909.	1912.	1917.
Urban—								
Iron and hardware	12	16	17·5	33	9	6·0	9·4	7·7
Brass and copper	16·75	16	18	—4½	12½	8·3	9·4	7·9
Carpenters	15·5	18	19·75	16	10	7·7	10·6	8·7
Cotton weavers	4·25	6·25	9	47	44	2·1	3·7	4·0
Masons and builders ..	15·25	17·25	19·5	13	13	7·6	10·2	8·6
General unskilled	6·25	7	8·75	12	25	3·1	4·1	3·9
Rural—								
General unskilled	5·33	5·5	6·7	3	22	2·7	3·2	2·9
Carpenters	11·5	12·25	15·33	6	25	5·7	7·2	6·8
Blacksmiths	9·75	13·75	14·25	41	4	4·9	8·1	6·3
Masons	12·75	14·75	16·5	16	12	6·4	8·7	7·3
Ploughmen	2·2	4·1	5·5	86	34	1·1	2·4	2·4

The low wages of rural labour and especially those of ploughmen are mainly due to the fact that they are usually accompanied by some payment in kind. In calculating the figures in the last three columns the price of wheat has been taken as Rs. 3-12-0 in 1909, Rs. 3-3-0 in 1912 and Rs. 4-4-0 in 1917.

Variations in wages always show a drag over those in prices, and as the price of wheat was lower in 1912 than in 1909 and 1917 it is natural to find that wages in that year had a comparatively high purchasing value. Without going into minor variations which the accuracy of the figures does not warrant, the table shows that wages have been increasing rapidly and that, except in the case of one class of urban labour, the increase during the period 1909-17 more than compensated for the rise in prices.

Comparison with the figures given in paragraph 22 shows that urban wages and also the wages of unskilled agricultural labour had rather less purchasing power than in the previous decade. It is unlikely that the immense rise in prices since 1917 has been fully reflected in wages and it may be expected that the report of the wage census to be held in 1922 will show a drop in the purchasing power of all classes of wage.

Up to about 1907 the purchasing power of wages had risen steadily, but since then there appears to have been a slight drop and it may be anticipated that the next enquiry will reveal a distinct drop. Turning back to paragraph 10 it is clear that this involves increased gains to the non-working landowner but does not necessarily lead to greater profit for the employer of urban labour; this being so it is reasonable to expect that in the near future agricultural wages will rise at a greater rate than industrial wages.

It is interesting to examine the effect of a decade of rather unfavourable seasons and of rapidly rising prices and wages on the economic position of the farmer; the marginal table indicates that that position has undergone slight but steady improvement, the proportion of land under mortgage has steadily fallen, more land has been freed from mortgage than has been mortgaged, and the price of land has risen considerably.

Year.	Percentage of cultivated area under mortgage.	Area out of every 10,000 acres of cultivated land which was			Average price of cultivated land per acre.
		Mortgaged.	Redeemed.	Sold.	
1911 ..	11·9	69	88	44	129
1912 ..	12·0	74	91	54	123
1913 ..	11·7	79	96	66	107
1914 ..	11·5	88	102	44	249
1915 ..	11·6	83	87	49	180
1916 ..	11·5	82	76	38	216
1917 ..	11·4	78	67	35	227
1918 ..	10·9	69	69	35	252
1919 ..	10·9	72	90	49	184
1920 ..	10·7	90	120	49	275
Mean ..	11·4	78	89	46	194

The fact that the first three columns do not agree is due to the fact that the proportion of the total land which has been cultivated has varied from year to year; all the transactions involved in the table covered uncultivated as well as cultivated land.

Co-operative Credit Societies.

32. The beginnings of the co-operative credit movement amongst the people of the Punjab were described in paragraph 55 of the last census report.

In 1911 there were four main types of society, two primary and the other two secondary. The usual primary type was an agricultural credit society devoting its energies to advancing money to its members at favourable rates to enable them to pay off old debts and to survive the temporary strain of unfavourable seasons; of these there were then 1,074 societies scattered over twenty-three districts. Original members owned shares in the societies which they subscribed in instalments over a period of ten years after which the shares were returnable; three-quarters of the profits were divisible amongst members as non-returnable shares and the remaining quarter was indivisible and was to be utilised to form a reserve fund; other sources of working capital were loans and deposits from both members and non-members and from other societies of the same type or from the central banks and unions which will be described below. The available working capital of these 1,074 societies is detailed in the margin and consisted of about 30¼ lakhs; of this sum 9¼ lakhs were in the form of loans by one society to another and formed part of the working capital of both the loaning and borrowing society, and therefore were counted twice over; it however cannot be called capital of the societies as a whole and omitting this item they worked with a capital of about 21 lakhs of which 16 were owned either directly or indirectly by the members and 5 came from outside sources.

000's omitted—	Rs.
Share capital ..	8,94
Loans from members ..	6,95
Loans from non-members ..	4,20
Loans from other societies, and central banks ..	9,26
Loans from Government ..	77
Reserve fund ..	17
Total ..	30,29

This type of society has retained premier place till the present time; certain modifications have been introduced; for example, during the year 1911 the system of granting Government loans to societies of this type was abandoned as they could exist without this help; in 1916 all members who did not own shares in societies were struck off the rolls, these members having formerly been admitted on a nominal payment but never having been full and useful members of the societies. It was found that with members owning shares of various amounts those who held large shares welcomed high rates of interest for the sake of the profit-sharing thus losing sight of the true co-operative principle, and in 1918 an attempt was made to eliminate the three-quarter divisible share of profits; nearly all the societies formed since then have adopted the principle of indivisible profit and many of the old societies have followed suit.

In 1921 the number of primary societies of this type—"agricultural credit"—was 7,605 scattered over every district of the province and including 196,691 members; the working capital was over 216 lakhs and was made up as shown in the margin; in 10 years the capital has increased from 30¼ lakhs to 216 lakhs; that part of it which is not derived from other societies and central banks has increased from 21 to nearly 133 lakhs and whereas in 1911

000's omitted—	Rs.
Share capital ..	51,72
Loans from members ..	14,13
Loans from non-members ..	14,81
Loans from societies ..	2,07
Loans from central banks ..	81,28
Loans from Government ..	37
Reserve fund ..	51,75
Total ..	2,16,13

000's omitted—

Year.	Loans to members. Rs.	Recoveries. Rs.
1911 ..	22,79	10,38
1912 ..	35,19	16,72
1913 ..	62,55	29,16
1914 ..	71,59	39,83
1915 ..	36,04	30,62
1916 ..	33,25	25,35
1917 ..	31,58	33,41
1918 ..	33,04	32,49
1919 ..	47,40	38,79
1920 ..	67,19	49,36
1921 ..	82,89	41,72

only 76 per cent. was owned by members now 89 per cent. is so owned. This marvellous advance in members and resources has been accompanied by a steady increase in useful endeavour; the main object of such societies is still the creation of funds to be lent to their members and the amount of loans lent out and recovered each year is noted in the margin (each year ends on 31st July).

It is the principle of these societies to advance loans only for legitimate objects and to encourage thrift. The objects for which loans have been borrowed have been tabulated for representative societies from time to time; each time this has been done the results have been somewhat similar and the following figures are typical and represent the averages of 1917 and 1918 in the form of percentages of the total money given out in loans :—payment of old debt and redemption of mortgage 25; purchase of cattle 21; payment of revenue 14; marriage expenses 7; household expenses 7; purchase of seed 6; trade 5; purchase of fodder 2; payment of rent 1; repayment of takavi (Government loans) 1; and miscellaneous 11. In 1915 a very interesting summary of some of the work done revealed that the members owed about 72⅓ lakhs to the societies but that by reason of their borrowings they had paid off at least 82 lakhs of old debt and mortgage and regained possession of over 8,000 acres of land, whilst they had also accumulated savings of 50 lakhs in the societies' funds. Nor did this alone represent their financial benefit, for, by reason of their greater affluence, they had been paying off many old debts from their private pockets without resorting to loans from the societies, and it is estimated that co-operators are now paying off old debts at the rate of twenty lakhs per annum. Apart from the main object of creating funds from which to provide credit the societies brought into being a corporate feeling which could be directed by the leading members with the result that at various times they have launched out into other branches of work, amongst which may be noted the purchase and distribution of improved implements and of improved seed, the sale on commission of agricultural produce resulting in selection and grading of produce and encouragement to plant good seed; the corporate spirit has also led to a desire for education, funds have been provided for scholarships and for school buildings and dispensaries; the inspecting staff has received training at agricultural colleges which they pass on to the members, members themselves have sent representatives to agricultural courses, and demonstrations of scientific methods of agriculture have been arranged in the villages; it has further led to joint social endeavour in the direction of restricting marriage expenses and other extravagant expenditure, and of submitting disputes to arbitration.

These varied interests have led to the formation of societies which are not primarily credit societies and which have not been included in the figures given above; figures for these are given in the margin; they are all societies of agriculturists and have all grown out of the primary form of society of which there were 1,074 in existence in 1911. The objects for which they work are indicated by their titles and they are working for the good of their members in many subsidiary ways. Members of these specialised societies are probably nearly all of them members of credit societies as well, so that we must not add them to the numbers of agricultural co-operators; and taking 196,691 as the number of members of agricultural credit societies and

Class.	No.	Number of members. Individuals	Number of members. Societies.
Purchase and sale ..	171	1,537	1,845
Production and sale ..	19	597	191
Arbitration	87	10,299	..
Consolidation of holdings ..	60	1,698	..
Night schools	45	784	..
Silt clearance	3	49	..
Reclamation of Cho waste lands	8	371	..
Thrift and savings ..	2	37	..
Cattle and sheep breeding ..	11	204	..
Irrigation	1	16	..
Cattle purchase	2	92	..
Cattle insurance	37	529	..

noting that about 80 per cent. of the societies are amongst Musalmans, we find that one in every 20 persons actively engaged in agriculture and one in every 13 agricultural Musalman workers belong to co-operative credit societies;* and from being a benefit to a few selected progressives in 1911 the movement has become one of general application affecting the whole of the agricultural life of the province.

So far we have dealt only with agricultural credit societies and their present day descendants. The other primary societies existing in 1911 were described as urban, and of them there were eleven, four of which were purely "*credit*" societies, two "*credit combined with produce and sale of stores*" and five "*industrial*" consisting of four weavers' societies and one blacksmiths'. The co-operative movement in non-agricultural circles is necessarily more varied though less extensive than amongst the agricultural classes. These eleven societies marked the beginning of a movement which has led to the formation by the end of July 1921 of 303 societies of which 57 are amongst weavers; they include 116 "*credit*" societies and 180 "*purchase and sale*" societies; their aggregate capital is shown in the margin, and they have 15,371 members.

000's omitted—	Rs.
Share capital ..	3,13
Members' loans and deposits ..	1,78
Non-members' loans and deposits ..	52
Loans from societies ..	48
Loans from central banks ..	1,81
Reserve fund ..	99
	8,74

This form of co-operation has not captured the imagination of the people whom it helps to the same extent as the agricultural credit system; many societies have been formed and have been dissolved owing to lack of interest and the true co-operative spirit; industrial societies have needed much supervision to render them successful; but gradually types suitable to each class are being evolved and the existing societies are the results of a process of survival of the fittest and are doing an immense amount of good work; amongst the credit societies may be mentioned societies amongst employees of the North-Western Railway, the Telegraph Department, the Punjab Civil Secretariat, the Dhariwal Mills, and of various Municipalities and District Boards, but the multiplicity of detail is too great for a full exposition here. This completes a short analysis of the primary societies and we must now turn to the secondary societies which exist to supply capital and to organize the efforts of individual primary societies; these are of four main forms, the Central Banks and Unions; the Supply Stores and Supply Unions; the first two are large credit societies that transact business with the primary credit societies, supplying them with capital in the form of loans and accepting deposits and loans from those which have surplus capital to dispose of; besides supplying their own capital in the cause of co-operation they pool the capital of the primary societies and enable them to help each other in a way they could not do by themselves.

Members of the central banks include both individuals and societies and since 1916 at least half the shares issued have been reserved for societies; on the other hand the union is an association of societies only and has no individual members. The share capital of the central banks is transferable but not returnable and the liability is limited by shares; these banks pay a dividend on shares whilst the profits of a union are indivisible. The rival advantages of the two forms of secondary society are difficult to estimate; the central bank is possibly more efficient in providing loans for it controls outside capital, but on the other hand the desire for dividends may lead to an unduly high rate of interest; the union is not affected by the greed of profit sharers and its supervision is much more efficient. The same difference which exists between central banks and unions differentiates Supply Stores and Supply Unions; the former include individuals amongst their members and the latter do not. The former exist only in towns and have achieved little success, societies which are members of them are leaving them and seeking to join supply unions instead; here again the defect of the supply stores is found in the selfishness of individual members.

These large banks and unions control a large amount of credit and have inspired confidence to such an extent that they are able to obtain large cash credits from the Bank of Bengal and other financial corporations. The progress amongst

* *Note.*—In Punjab British Territory the number of actual workers whose main employment is agriculture is 3,860,900 and the corresponding figure for Musalmans is 2,092,674.

central banks and unions is exhibited in the following table :—

		Central Banks.		Unions.		Weavers' Central Stores and Supply Unions.	
		1921.	1911.	1921.	1911.	1921.	1911.
Number	..	31	8	63	1	4	0
Number of members.	individuals ..	2,063	577	0	0	0	0
	societies ..	4,873	0	1,942	63	85	0
000's omitted	Share capital ..	11,50	1,28	1,78	7	3	0
	Loans from individuals ..	52,53	4,24	9,37	90	26	0
	Loans from central banks ..	18,42	6	10,56	11	1,47	0
	Loans from societies ..	8,58		10,32		2	0
	Loans from government ..	35	0	30	0	18	0
	Reserve funds ..	3,92	1	95	0	14	0
	Working capital ..	95,30	5,59	33,28	1,08	2,10	0
	Year's profit ..	2,32	15	27	1	0	0

The co-operative movement at first caused widespread opposition from the money-lending classes but it is now an accepted fact and open opposition is rare; its existence in many cases has led to a reduction of the money-lenders' rate of interest. The first few years of the last decade were ones of rapid expansion and enthusiasm. The financial crisis which occurred in 1913 following on the closing of the Peoples' Bank in September of that year, followed by the outbreak of war, resulted in widespread contraction of credit; the co-operative societies suffered considerably but there was no such run to withdraw deposits as in the case of ordinary banks and the Post Office Savings Bank. The period 1914-1917 was however necessarily one of consolidation rather than expansion; the central banks in order to meet an anticipated withdrawal of deposits were unable to loan all the requirements of the primary societies; a succession of poor harvests combined with war conditions strained the banks to their utmost, and in some cases members had to resort once more to the village money-lenders. On the whole the societies survived splendidly and the lull in expansion was made an opportunity for cancelling unsuccessful societies and removing undesirable members, so that by 1918 the co-operative movement was once more expanding rapidly with a body of members purged of undesirables. Since then progress has been continuous, and much as the movement has benefited the Punjab in the past this is nothing to what may be hoped for in the future.

Stock ...anies. 33. The history of joint stock enterprise during the past decade is of interest in indicating several features of the commercial and financial life of the province. At the time of the last census there was a boom in companies of doubtful character; ignorance of business methods amongst the promoters, and still more a well-founded belief in the ignorance and credulity of those who would be their creditors and clients, led to the flotation of numerous hopeless ventures. The following statement shows the number and capital of companies in existence on the 31st March each year. It also shows similar details for the new companies registered and for companies which ceased to work in each year :—

Year.	New companies registered.				Companies which were liquidated or otherwise dissolved.				Companies existing at the end of the year.			
	No.	Capital 0000's omitted.			No.	Capital 0000's omitted.			No.	Capital 00000's omitted.		
		Nominal.	Subscribed.	Paid up.		Nominal.	Subscribed.	Paid up.		Nominal.	Subscribed.	Paid up.
1910-11	..	..	..	..	..	..	..	..	149	5,80	2,77	1,86
1911-12	57	64,7	4,8	1.7	12	28,2	1,6	1,0	194	6,23	2,91	1,94
1912-13	23	88,7	1,0	3	44	87,5	16,7	4,3	155	6,36	2,57	1,67
1913-14	21	2,02,6	7,8	1,4	31	1,07,6	49,3	21,0	146	7,58	2,68	1,62
1914-15	6	39,2	0	0	52	4,03,2	72.1	25,6	99	4,43	2,14	1,50
1915-16	5	3,4	9	5	16	40,1	17,7	7,6	88	4,08	1,99	1,47
1916-17	8	1,28,4	55,5	55,2	16	86,7	5,2	2,1	80	4,91	2,68	2.19
1917-18	7	13,5	1,0	1,0	4	19,5	9,3	7,9	83	5,46	3,08	2,62
1918-19	0	0	0	0	8	23,7	15,1	14,6	76	5,24	3,63	3,17
1919-20	9	86,9	12,2	6,2	6	18,1	7,6	7,0	79	5,95	3,82	3,25
1920-21	23	1,37,9	19,2	4,9	5	10,7	7,2	3,2	97	7,59	4,39	3,55

Note.—In 1912-13 eighteen companies were transferred to Delhi and in 1914-15 one company was transferred to Bombay; in 1913-14 one company was transferred from Delhi and in 1918-19 one company from the North-West Frontier Province.

It will be seen that during the first year of the decade the rush to found new companies continued and in the next two years, in spite of a large number of failures, many new companies were founded; in 1914-15 however a record number of failures was accompanied by practically no new enterprise. The number of companies continued to decline until 1919, since then there has been some increase. The capital invested in these companies has not decreased at the same rate as the number of companies ; in fact, since 1916 capital of all classes has shown a steady increase. The reason for this is that companies which have failed were in many cases petty concerns with small nominal capital of which very little was paid up. The companies which have survived throughout the decade have been of a more satisfactory type with a larger capital of which a far larger proportion is paid up. In 1911, of the total nominal capital of 580 lakhs, only 48 per cent. was subscribed and 32 per cent. paid up ; but in 1921, of the nominal capital of 759 lakhs, 58 per cent. was subscribed and 47 per cent. paid up. At the time of the last census an objectionable feature of joint stock enterprise was the flotation of a large number of provident societies of a fraudulent type ; in 1911-12 no less than 36 societies of this type were floated whilst in the following year 27 came to grief ; at the same time banking enterprise of unsound nature was rife, and miscellaneous trading companies with insufficient resources were also being floated in large numbers. In 1913-14 the existence of the unsound banking businesses ended in disaster, 10 banks with paid up capital of 19 lakhs closed their doors, amongst them the Peoples' Bank with a paid up capital of 12½ lakhs ; in the following year 19 more banking companies failed and, as a result of the damage to the finance and credit of the community, 22 trading companies also came to an end. These failures were inevitable on account of the unsound nature of the companies concerned, but they were expedited by the stringency caused by war conditions and their numbers were added to on account of the greater regulation of joint stock enterprise following on the passing of the Companies Act of 1913. The effects of the crisis lasted throughout the decade, but by 1916-17 most of the totally unsound companies had vanished and of the 80 companies on the registers 78 were reported to be engaged in active business. In this year the Trust of India, the Associated Hotels and the Banyan Trust were all floated with a large capital of which a large proportion was paid up, and in the following year these firms and the Alliance Bank of Simla, all of which are connected with one large English firm of bankers, increased their capital ; the large increase of capital in these two years shown in the statement was entirely due to English enterprise and the paid up capital of Indian firms actually decreased. The next two years, though producing few new companies, were years in which the existing companies were extremely active. The year 1919-20 showed a revival of joint stock enterprise, in that a large number of new companies were formed and capital was increased all round ; it should be noted however that the Registrar of Joint Stock Companies stated that though there had been an increase in the number of new companies floated there was little sign of any growth of healthy joint stock enterprise. The marginal statement shows the nature of the companies existing in 1911 and in 1921. The most important of these are banking and loan societies. During the decade 37 new banks were started and 42 dissolved. No less than 23 were floated in the first three years of the decade whilst 29 failed in the two years 1913-14, 1914-15. Those existing in 1921 are on a much more satisfactory basis than those of 1911 ; about 45 per cent. of the nominal capital is paid up, whilst of the 42 banks which failed, less than 10 per cent. was paid up. Insurance societies, which numbered 14 in 1911 and are now reduced to 4, included the fraudulent

Nature of company.		No.	Capital 0000's omitted.		
			Nominal.	Subscribed.	Paid up.
Banking and Loan	1911	29	2,22,0	1,19,4	65,4
	1921	25	5,05,5	2,91,9	2,25,3
Insurance	1911	14	71,7	2,3	2,8
	1921	4	30,0	16,7	5,0
Transport	1911	1	1,0	1,0	3
	1921	4	9,5	2,6	2,0
Trading and Manufacturing	1911	58	89,6	28,5	21,0
	1921	44	1,07,2	36,8	25,5
Mills and Presses	1911	34	1,30,4	82,4	73,2
	1921	9	21,3	16,3	15,2
Mines and Quarries	1911	4	28,7	4,4	3,3
	1921	2	3,3	3,1	3,1
Land and Buildings	1911	3	8,5	9	3
	1921	2	1,5	2	1
Breweries	1911	1	18,0	18,0	18,0
	1921	3	32,9	32,9	32,9
Sugar	1911	2	4,5	1,6	1,6
	1921	2	8,0	6,6	4,8
Others	1911	3	5,7	4	1
	1921	2	70,0	48,4	45,7

provident societies which have been mentioned above; 38 societies have been floated and 44 dissolved during the decade, whilst others have now been classified under other heads. Of the 44 societies dissolved, 22 existed for less than 12 months and 14 for less than 2 years; they had nominal capital of 71 lakhs of which only 4 lakhs was paid up; the province is well rid of such questionable businesses. The number of trading companies shows a decline from 58 to 44 in the 10 years, but during that period no less than 63 companies were registered while 70 failed, indicating the unhealthy state of joint trading ventures. The decline in joint industrial enterprise is most marked; 34 mills and presses existed in 1911 whilst only 9 remained in 1921; this is partly due to the registering centre of several such companies being transferred to Delhi, but the Punjab returns show 24 such companies which have been wound up; these 24 companies had a nominal capital of 97 lakhs of which 29 were paid up. The existing companies have a nominal capital of 21 lakhs of which 15 are paid up and include many sound and prosperous concerns. To sum up we may say that the past decade has been one of evident disaster for joint stock effort amongst the Punjab population; the wave of optimistic investment and fraudulent flotation in the early years led to a shaking of credit and a disruption of trade from which the province has not yet recovered; joint stock enterprise is therefore a subject of distrust, which prevents it from taking its proper place in financial and industrial expansion. Though the existing companies are mainly on a sound basis many of the largest and soundest of them are not indigenous but owe their capital and management to European firms.

le. 34. The main trade of the Punjab and Delhi is carried on by rail and river with other parts of India or with foreign countries through the ports of Karachi, Bombay and Calcutta; the weight and value of the imports and exports are registered on the railways and at river posts, the value is in many cases arbitrarily assigned and must not be taken to be more than a rough guide. The total imports during the decade, figures showing the average net import or export of the main articles of trade, and others showing the direction of the main streams of trade are given in the margin; all these figures are in lakhs of rupees. In the previous decade both imports and exports had more than doubled, in this decade imports have increased steadily and have again doubled, but exports have fluctuated and at the end of the decennium only exceeded their initial value by about fifty per cent. Until the end of 1918-19 exports and imports tended to vary together and the balance of trade was first on one side and then on the other, the total trade for the first eight years showing an adverse balance of only 419 lakhs against the Punjab, an insignificant sum well within the margin of error due to unregistered trade and to the arbitrary values assigned to registered goods; in the last two years however the balance of trade was against the Punjab to the extent of 882 and 2,196 lakhs.

Year.		Exports.	Imports.
1911-12	..	2,763	3,001
1912-13	..	3,202	3,176
1913-14	..	3,411	3,159
1914-15	..	2,758	3,123
1915-16	..	3,129	3,363
1916-17	..	3,390	3,429
1917-18	..	3,864	3,852
1918-19	..	5,225	5,058
1919-20	..	4,405	5,287
1920-21	..	3,946	6,142

Average net exports.			Average net imports.		
Wheat	..	877	Cotton goods	..	1,059
Raw cotton	..	494	Sugar	..	446
Gram and pulses	..	492	Metals	..	261
Oilseeds	..	112	Coal and coke	..	139
Hides and skins	..	74	Jute	..	136
Wheat flour	..	67	Provisions	..	87
Wool	..	38	Oils	..	85
Jowar and bajra	..	7	Wooden goods	..	78
			Apparel	..	51
			Dyes and tans	..	29
			Spices	..	27
			Drugs	..	25
			Net Total	..	350

MAIN DIRECTIONS OF TRADE.

To or from		Exports.	Imports.
United Provinces	..	640	834
Rajputana	..	254	173
Bombay	..	135	187
Sind	..	181	123
Bengal	..	15	199
Kashmir	..	21	73
Ports of—			
Madras	..	25	15
Bombay	..	461	645
Karachi	..	1,559	963
Calcutta	..	181	496

The registered movements of gold and silver show an annual average net import of 530 lakhs; so that as far as any record exists the unfavourable balance of trade is not met by export of treasure, and indeed it is well known that the province absorbs vast quantities of gold and silver which disappear from circulation and yet are not exported. It seems to follow that during the last two years of the decade the province was living on credit and that unless there is a

great expansion in export there will be a diminishing import in the near future.

The steady increase in imports indicates a steady increase in prosperity and in the general standard of living, they have doubled in ten years and quadrupled in twenty whilst the increase in the number of people for whom they are imported has only been about three per cent. in twenty years.

That exports have failed to keep pace with imports is due to the fact that they consist almost entirely of agricultural produce dependent in amount on the nature of the seasons, combined with the definite governmental control on exports which was instituted during the war in an attempt to check the advance in prices of food. Every single article that has any considerable net export is a direct product of the soil, and the bitterest opponent of Malthusian principles would hesitate to maintain that a trade which doubles itself every ten years can be made up entirely of agricultural produce on the export side. The trade of the Punjab has been rendered possible in the past by the vast extension of cultivation and irrigation; it may be rendered possible for a short time in the future by further extensions and by increased yields due to the spread of more scientific agricultural methods; but the time is rapidly approaching when imports must be replaced by more local manufacture if the standard of living is to continue to rise.

The nature of the principal imports indicate the needs of society in a simple state, and also show at once the main directions in which industrialism should be directed to meet the needs of the province.

In connection with the figures for trade with particular places, it should be noted that the balance of trade with foreign countries through the ports of India is in favour of the province, whilst that with other parts of India is heavily against it. In so far as imports of manufactured goods are concerned, it is more hopeful for the Punjab that the adverse trade balance should be with India than with foreign countries, for it will be easier for it to substitute its own manufactures.

A small volume of trade passes over well defined routes leading to Afghanistan, Central Asia and Tibet; imports and exports are registered at trading posts and the total value of these in thousands of rupees during the last decade is shown in the margin; the total amount is so small that its effect on the resources of the province is negligible, and the nature of the articles included in it indicates the impossibility of any great expansion.

AFGHANISTAN.

	Imports.	*Exports.*
1911-12	37	23
1912-13	67	151
1913-14	58	71
1914-15	15	51
1915-16	27	185
1916-17	25	85
1917-18	27	598
1918-19	32	61
1919-20	28	110
1920-21	109	254

CENTRAL ASIA.

	Imports.	*Exports.*
1911-12	179	121
1912-13	357	187
1913-14	1,095	1,737
1914-15	877	1,497
1915-16	1,141	1,329
1916-17	1,022	1,210
1917-18	1,342	2,969
1918-19	1,532	3,793
1919-20	1,091	4,257
1920-21	2,046	4,400

TIBET.

	Imports.	*Exports.*
1911-12	248	50
1912-13	367	48
1913-14	426	31
1914-15	318	37
1915-16	427	32
1916-17	585	50
1917-18	579	29
1918-19	665	18
1919-20	581	38
1920-21	660	36

CENTRAL ASIA.

Imports.		*Exports.*	
Raw silk ..	56%	Cotton piece-goods ..	48%
Charas ..	31%	Manufactured silk ..	14%
Raw wool ..	8%	Paints and colours ..	9%
Live animals ..	2%	Hides and leather ..	8%
		Indigo ..	7%
		Tea ..	3%

Of the imports from Afghanistan no less than 62 per cent. have been in fruit, vegetables and nuts whilst the only other items of importance have been ghi, hides, and skins, raw wool and drugs; the exports have consisted of 25 per cent. manufactured leather goods, 25 per cent. Indian cotton piece-goods, 18 per cent. English cotton goods, and small quantities of rice and iron.

The registration of trade with Central Asia was only placed on a satisfactory basis in 1913-14 and for the last eight years of the decade the principal merchandise imported and exported

was as shown on the left; the imports of raw silk and of charas are by far the most important and supply a considerable proportion of the quantities available in the provincial markets; amongst exports it is sad to note that less than one-fifteenth of the cotton piece-goods are manufactured in India.

Eighty per cent. of the imports from Tibet consist of raw wool whilst borax accounts for another eight per cent., the only other imports of any size are of live animals and salt; the exports are negligible.

Industrial Development.

35. The following table, which refers to the Punjab and Delhi together and has been compiled from the occupational tables for 1911 and 1921, shows that the number of persons dependent on industry has not increased so fast as the total population and that, in consequence, the proportion of the former to the latter has dropped from 203 to 195 per *mille*.

Nature of employment.	Percentage of total.		Increase per cent.
	1911.	1921.	
Exploitation of animals and vegetables ..	60·0	59·0	5·7
Extraction of minerals ..	0·1	0·1	—36·2
Industry ..	20·3	19·5	1·4
Transport	2·9	2·0	—27·0
Trade	6·5	7·0	13·5
Public Force and Administration	1·7	1·7	5·7
Liberal Arts and Professions ..	2·5	2·2	—8·2
Domestic Service	2·1	2·6	30·5
All others	3·9	5·0	38·2

As the industrial community is largely composed of village artisans, who follow their hereditary occupations irrespective of the demand for their services, very little weight can be attached to the figures and, though it is clear that there has been no effective demand for increased industrial labour, it need not be concluded that the industrial life of the provinces has suffered a reverse.

On the other hand the figures for the number of factories and other industrial establishments employing twenty or more people show a considerable advance in the organised industry of the two provinces; in 1911 these numbered 443 and employed 49,324 operatives whilst by 1921 they had increased in number to 538 and were employing 62,424 persons. The persons employed in these establishments mainly fall within the occupational groups "Extraction of minerals" and "Industry" in which there were 1,802,752 actual workers engaged in 1921; hence in these particular occupations there is only one man employed in these establishments to every twenty-nine who either work by themselves or in small groups of less than twenty; the advance in factory production, though considerable, is not such as to have any appreciable effect on the population in general or the industrial community in particular.

Communications.

36. Owing to the war and to financial stringency the decade has been one in which the communications of the province have undergone little extension. Railway requirements in Mesopotamia and other Eastern war areas were supplied almost entirely by the Indian Railways, which depleted their staff, plant and rolling stock and even tore up some of their permanent way in a magnificent effort to meet the necessities of the military authorities.

Economic conditions led to serious strikes on several of the railway systems of the country including the North-Western Railway which had to reduce its services of passenger traffic and entirely discontinue goods bookings for certain periods; a serious shortage of coal, due to strikes in the mining centres and to shortage of rolling stock required to import it into the Punjab caused even more serious interruptions in traffic facilities.

With their attention entirely devoted to supplying military demands and to maintaining their home services with as little interruption as possible, the authorities could not attempt to carry out any but the most urgent construction within the province, with the result that only 487 miles of new branch lines were opened during the decade, whilst in 1917 the Sutlej Valley Railway from Kasur to Lodhran with 208 miles of track was dismantled to provide permanent way material for military lines. The new lines, of which those affording increased

communications in the Ferozepore, Jullundur and Hoshiarpur Districts are the most important, are shown below :—

1.	Shorkot Road to Jaranwala	88	miles opened in	1911.
2.	Khanpur to Chachran	22	"	1911.
3.	Jakhal to Hissar	50	"	1913.
4.	*a.* Lohian to Phillaur *via* Nakodar ..	39	"	1913.
	b. Jullundur City to Hoshiarpur	23	"	1913.
	c. Ferozepore Cantonment to Jullundur City *via* Lohian and Kapurthala	72	"	1912-14.
	d. Nakodar to Jullundur City	19	"	1914.
	e. Jullundur City to Mukerian	45	"	1915.
	f. Phagwara to Rahon *via* Nawashahr ..	26	"	1915.
	g. Nawashahr to Jaijon	19	"	1917.
		243	"	1913-17.
5.	Sialkot to Narowal	38	"	1915-16.
6.	Mandra to Bhaun	46	"	1915-16.

In addition to the construction of these 488 miles of new line, the Railway system was vastly improved by the doubling of the line from Ambala to Lahore and from Lahore to Raewind which was completed during the decade.

Between 1911 and 1920 the mileage of metalled roads rose from 2,619 to 2,937 ; the whole of the increase was in roads maintained by local authorities and mainly consists of short stretches of road serving local markets and railway stations. Little has been done to extend the system of through road communications, but a great deal of improvement has been effected on the one great road of the province ; as a result of the doubling of the railway line from Ambala to Lahore the old railway bridges over the Sutlej and Beas were abandoned and these have been converted into road bridges ; a road bridge has been constructed over the Ravi to replace the old bridge of boats, and another over the Chenab at Wazirabad was under construction at the time of the census and has since been opened for traffic ; works of less magnitude have overcome the temporary dislocation of road traffic which used to occur as the result of floods in seasonal torrents which cross the road near Ambala and other places ; the Grand Trunk Road now runs without a break right through the province and traffic on it suffers no interruption at any time of year.

The length of unmetalled roads has risen from 20,857 to 22,106 miles in the same period.

In spite of the financial stringency there has been much activity on public works not directly connected with communications, and the decade is marked by small beginnings in the introduction of electricity. The Simla Hydro-electric scheme which provides energy to Simla and also pumps water to that station from a distance of thirteen miles was commenced in 1908 and completed in 1914 ; Lahore has been provided with electric light and energy for fans by the Lahore Electric Supply Company which started distribution of current in 1912 ; in Mianwali District the construction of the Nammal Dam has provided irrigation to 18,000 acres of cultivable land and has marked a new development in the irrigation system of the province ; in Lyallpur an experiment in agricultural economics has been initiated by the construction of a grain elevator on American lines ; in Lahore much progress has been made in the extension and construction of public buildings including hospitals and a veterinary college, and a step forward in the system of treatment of criminals has been marked by the conversion of the old district jail into a Borstal Institution where youthful offenders are afforded a chance of reclamation.

Section V.—The Movement of the Population, 1911-21.

37. The census showed an increase of 1,309,693 and 74,741 persons in the Punjab and Delhi respectively, being increments of 5·5 and 18·8 per cent. on their populations in 1911. *Total variations in the Punjab and Delhi.*

Taking the two provinces together the numbers of immigrants and emigrants have increased by 52,713 and 1,332 respectively resulting in a total gain by migration of only 51,381 persons which forms a negligible factor in the total increase. In the Punjab 2·5 per cent. of the total population, and in Delhi 38·1 per cent., consists of immigrants ; hence the census statistics for the Punjab illustrate the natural increase in the countryside whilst those for Delhi do not.

Figures showing how the total increase is distributed between British and State territory, between town and country, and between the sexes are given in the margin. Immigration accounts for the increase in Delhi being so much greater than that in the Punjab; though this immigration was mainly caused by the creation of the new capital it is large in the rural as well as in the urban area. That the rate of increase has been larger in British Territory than in the Punjab States is entirely due to the fact that much of the State territory is situated in parts of the province where the increase has been smaller than elsewhere, it is due to locality and has no traceable connection with any difference in administration.

	Percentage of increase.		
	Persons.	Males.	Females.
a.—Total area.			
Punjab ..	5·5	4·9	6·3
Punjab, British ..	5·7	5·0	6·5
Punjab States ..	4·8	4·4	5·3
Delhi ..	18·8	21·1	13·0
b.—Urban area			
Punjab ..	12·2	13·5	10·4
Punjab, British ..	12·9	14·5	10·8
Punjab States ..	8·2	8·1	8·4
Delhi ..	20·1	25·9	12·5
c.—Rural area			
Punjab ..	4·8	3·9	5·9
Punjab, British ..	4·8	3·9	6·0
Punjab States ..	4·5	4·1	5·0
Delhi ..	14·8	15·7	13·7

Vital statistics show a slower rate of natural increase in towns than in rural areas, and that the actual increase in towns has been so much greater than in the country must be due to a movement of the rural population towards them. The increase in the Delhi urban area is exceptional and is fully accounted for by the creation of the capital, whilst the rapid increase in the rural area is also due to immigrants attracted by the vicinity of the city and illustrates the universal fact that the countryside can and does support a larger rural population in the vicinity of large towns than elsewhere. The greater rate of increase in urban than in rural areas in the Punjab is an entirely new feature of census statistics, for the first time the proportion of the population living in towns has increased; this new feature is shown both in British and State territory but far less in the latter, the difference is in reality greater than the figures indicate as part of the increase in the urban population of the states is due to a mere terminological change under which the headquarters of many States have been for the first time treated as towns in the census statistics.

Number of urban to 1,000 of the rural population.

	1911.	1921.
Punjab	108	115
Punjab, British ..	111	120
Punjab States ..	92	95
Delhi	1,583	1,657

In the Punjab as a whole there are now 671,285 more females and 638,408 more males than in 1911 and, though the difference between these numbers is small yet owing to the previous disparity between the sexes, this constitutes an increase of 6·3 per cent. amongst females as against only 4·9 per cent. amongst males. This higher rate of increase amongst females has done much to remedy the evil results of the plague in the previous decade which by 1911 had left only 817 females to every 1,000 males, and the proportion has now risen to 828. In all urban areas, except those in the Punjab States, males have increased faster than females showing that the drain of the towns on the rural population has been largely confined to male workers. Amongst rural areas that of Delhi is the only one showing a rise in the proportion of males; this is quite possibly due to the fact that the stream of migration to this partially suburban area has affected the sex distribution in the same way as it has done in true urban areas.

Number of females to 1,000 males.

	1911.	1921.
Punjab	817	828
Punjab, British ..	818	830
Punjab States ..	814	820
Punjab Urban Area ..	739	719
Punjab Rural Area ..	826	841
Delhi	793	733
Delhi Urban Area ..	752	672
Delhi Rural Area ..	860	845

The change in age distribution has been almost as striking as that in the proportion of the sexes; whilst the increase in the total population of the Punjab and Delhi has been 5·8 per cent. there has been a decline in the number of persons between 15 and 40 years of age associated with a very large increase in the numbers of old people and young children.

Increase per cent. in different age groups.

All ages	5·8
Under 10	10·8
10-14 inclusive	10·1
15-39 "	—0·1
40-59 "	4·2
Over 60	18·3

The influenza epidemic of 1918 is responsible for this change in age distribution as can be seen from the marginal table in which the death-rate of 1918 is shown as a multiple of the mean death-rate for the decade; in that abnormal year the death-rate amongst young children was increased by less than 50 per cent. whilst it was quadrupled amongst young adults and only doubled amongst the aged.

Death-rate of 1918 divided by the mean death-rate of the decade.

Age.		Male.	Female.
0-1	..	1·14	1·14
1-4	..	1·56	1·52
5-9	..	2·53	2·61
10-14	..	3·00	3·17
15-19	..	3·67	3·80
20-29	..	3·69	3·75
30-39	..	3·42	3·37
40-49	..	2·88	3·12
50-59	..	2·69	2·89
Over 60	..	1·85	2·00
All ages	..	2·18	2·26

The plague epidemics of 1901-11 lessened the reproductive power of the population by lowering the proportion of women, this defect has been remedied during the last decade but it has been replaced by a decline in the numbers of persons of the procreative ages. The defect observed in 1911 was one that might have been permanent, that observable in 1921 is one which carries its own remedy and will be removed by the mere passage of time; on the other hand the immediate position is worse than in 1911 for whereas in that year every 10,000 of the population included 152 women of child-bearing age (15 to 40) it now includes only 143.

Variations in Districts and Pressure on Resources

38. Subsidiary Table III shows the increase per cent. in the population of each district and state recorded at each census since 1881; it should be noticed that increase per cent. in population and increase per cent. in density are identical when used with reference to a fixed area; omission to note this elementary fact has led to some curious remarks in past census reports.

It will be my object to discover what permanent features and conditions influence the increase of population and then to discuss the temporary or fortuitous conditions which have interfered with the influence of the former during the last decade. In paragraphs 17 and 18 the pressure of existing population on existing resources was discussed at length and the districts were collected in five groups according to the extent of that pressure. The discussion was based on the static conditions of the moment, but the conclusions can now be compared with the actual movements of population in the past with a view to determining whether they account for those movements and, if not, whether they require modification.

The following lists of districts show them arranged within these groups according to the extent to which their population has varied during the last forty years and during the last decade:—

PERCENTAGE OF INCREASE IN TOTAL POPULATION.

1881 to 1921.			1911 to 1921.		
Group 5	..	97·7	*Group* 5	..	15·9
Lyallpur	..	2,313·7	Montgomery	..	42·3
Montgomery	..	97·0	Sheikhupura	..	19·8
Shahpur	..	87·6	Lyallpur	..	15·6
Sheikhupura	..	81·6	Lahore	..	13·0
Multan	..	60·1	Shahpur	..	11·6
Lahore	..	47·1	Multan	..	9·3
Jhang	..	46·0	Jhang	..	8·7
Group 4	..	30·2	*Group* 4	..	6·3
Ferozepore	..	46·9	Ferozepore	..	14·4
Hissar	..	21·5	Hissar	..	1·5
Attock	..	15·3	Attock	..	—1·3
Group 3	..	18·2	*Group* 3	..	—2·1
Mianwali	..	36·6	Mianwali	..	4·9
Muzaffargarh	..	28·8	Muzaffargarh	..	—0·2
Dera Ghazi Khan	..	28·4	Dera Ghazi Khan	..	—6·6
Jhelum	..	—3·5	Jhelum	..	—6·7
Group 2	..	2·8	*Group* 2	..	4·0
Rawalpindi	..	20·8	Ludhiana	..	9·7
Gujranwala	..	7·6	Rohtak	..	8·0
Rohtak	..	4·3	Amritsar	..	5·5
Jullundur	..	4·2	Rawalpindi	..	3·9
Amritsar	..	4·0	Karnal	..	3·4
Gurdaspur	..	3·5	Gujranwala	..	2·9
Sialkot	..	—0·3	Jullundur	..	2·5
Karnal	..	—3·2	Gurdaspur	..	1·8
Ludhiana	..	—8·3	Sialkot	..	0·7
Group 1	..	1·5	*Group* 1	..	—0·2
Simla	..	28·6	Simla	..	17·9
Gujrat	..	13·3	Gujrat	..	4·6
Kangra	..	4·8	Hoshiarpur	..	1·0
Hoshiarpur	..	2·9	Kangra	..	—0·6
Gurgaon	..	—10·5	Ambala	..	—1·4
Ambala	..	—18·0	Gurgaon	..	—6·6

An examination of the figures shows at once that the increase in population during the last forty years has been greatly influenced by the pressure on resources. In the first list the only districts which appear to be wrongly grouped are Ferozepore, Hissar, Attock, Jhelum, Rawalpindi, Simla, Gujrat, Kangra and Hoshiarpur; and five out of these nine districts can at once be eliminated for special reasons :—

The misplacement of Ferozepore is too slight to be of any significance; the increase in population of Rawalpindi and Simla is largely due to the presence of growing towns, apart from the urban population the increase in these districts has been 11·8 and—18·8 per cent. respectively; we have already seen that the people of Hoshiarpur and Kangra depend very largely on earnings of service outside their districts, and these earnings enable the population to increase in excess of the numbers which could be supported by the resources of the districts.

The list shows that in twenty-five out of twenty-nine districts the increase in population during the last forty years has been governed by the extent of pressure on resources. Everyone would expect that pressure on resources would affect the increase of population, but the figures go further and tend to show that this one factor has actually governed the increase to the exclusion of all others.

Cause and effect are so strikingly connected that we are at once led to question the grouping of the four districts which appear to form exceptions to the general rule, Hissar, Attock, Jhelum and Gujrat. Are we to recognise these as exceptions to a general rule proved by all other districts, or are we to argue in a circle and assume that they were wrongly grouped in paragraph 18? Hissar, Attock and Jhelum are all marked by two characteristics;—their dependence on rain and the inferior quality of much of their soil; the arguments in paragraph 18 were based on statistics extending over a term of years, and it was noted that in districts where crops suffered violent fluctuations they could not support such large numbers of people as in districts where they gave the same average outturn but were less liable to fluctuate from year to year; I am doubtful as to whether sufficient weight was given to this point and therefore whether these districts should not have each been placed in the group below that in which they are shown above. As regards Gujrat I can find no reason for modifying the conclusions drawn in paragraph 18.

The increase during the last decade does not show the same striking agreement with the arrangement of districts by groups though it shows some traces of the influence of the retarding force of pressure on resources; the same is true of the increase in other decades and it is evident that a period of ten years is insufficient for this one factor to prevail over the other innumerable influences which affect increase.

The second list indicates that during the last decade the increase has been much less than might have been expected in Hissar, Attock, Muzaffargarh, Dera Ghazi Khan, Jhelum, Sialkot and Gurgaon; whilst in a less degree Shahpur, Multan, Jhang, Mianwali and Gurdaspur exhibit the same feature of an unexpectedly slow rate of increase; and, on the other hand, Ferozepore, Ludhiana, Rohták and Gujrat show an increase in population larger than that which might be expected from their natural advantages and their previous history.

Effect of disease on variations in districts.

39. The first influence to which we turn is naturally that exerted by disease; the health of the decade has been uniformly good except for the epidemics of plague, fever and influenza in 1915, 1917 and 1918 respectively. Apart from these the death-rates of the various districts have been mainly governed by local conditions, but these epidemics spread over the province irrespective of conditions and the additional death-rate caused by them may be described as fortuitous; their influence was a chance feature of the decade quite independent of the permanent forces which affect growth

EXCESS IN DEATH-RATES DUE TO EXCEPTIONAL CAUSES.

District.	Plague 1915.	Fever 1917.	Influenza 1918.	Total.
Gurgaon	0·0	1·7	12·3	14·0
Rohtak	0·0	0·3	9·6	9·9
Montgomery	0·0	2·6	6·5	9·1
Ludhiana	0·8	0·2	7·7	8·7
Gujrat	3·4	1·0	4·0	8·4
Gujranwala	1·1	2·1	4·6	7·8
Dera Ghazi Khan	0·0	2·3	5·4	7·7
Hissar	0·0	0·7	6·7	7·4
Lahore	0·6	0·9	5·6	7·1
Sialkot	1·7	1·3	2·9	6·9
Shahpur	1·1	1·9	3·7	6·7
Jhelum	2·6	0·6	3·5	6·7
Gurdaspur	1·3	0·6	4·6	6·5
Multan	0·0	1·3	5·4	6·4
Jhang	0·2	1·7	4·5	6·4

of population. The figures in the margin show the extra death-rate caused by these diseases in the fifteen districts where their aggregate effect was greatest; the figures show the excess of the plague and fever death-rates in 1915 and 1917 over the normal death-rates from those diseases, and the total death-rate from influenza in 1918 all of which was abnormal.

Of these fifteen districts which suffered most heavily, nine are amongst those mentioned in the previous paragraph as showing a smaller increase than expected, but on the other hand three of them are amongst those in which the increase was characterised as unexpectedly high. The exceptional epidemics of the decade do not go far in accounting for the abnormalities in increase of population noted in the last paragraph.

Effect of Migration on Variation in Districts.

40. Migration will be discussed in detail in Chapter III but a few of the conclusions which will be found in that chapter must be mentioned here in order to explain some of the features of the recent changes in distribution of the population. Migration must not be regarded as a cause of the changes in district population but rather as the means through which such causes operate. It has already been shown that the changes in distribution over a long period have been almost entirely attributable to pressure on resources, and, as migration has always been taking place, it follows that it too is also governed in the long run by this pressure; it is therefore unnecessary to examine the normal trend of migration in this paragraph and attention will be confined to the abnormal or temporary migration that has occurred during the last decade, such migration whilst not in itself accounting for the abnormal changes in population noticed in paragraph 38 may throw considerable light on the causes which have produced them.

The main types of migration which will be noticed as peculiar to the last decade are that due to the establishment of the canal colonies and that due to the scarcity conditions which prevailed at the time of the census.

The statistics show that a canal colony passes through five stages in its evolution;—before being irrigated it supports a small population living in widely scattered villages or else of a nomadic nature; immediately after irrigation it receives a great influx of colonists who include the government grantees and large numbers of persons seeking employment as their tenants and artisans; the grantees are selected mainly from the most congested districts but also include persons from elsewhere who have particular claims, the tenants usually accompany the grantees and their composition shows the same characteristics; after the grantees have established themselves and the pioneer work is completed many of the tenants and labourers find that the keen demand for their services shows signs of abatement and large numbers return to their original homes or, if opportunity occurs, move on to another freshly colonised tract; those who leave the colony consist mainly of those who came originally not because of severe pressure in their own districts but because of attachment to grantees coming from districts which are not overcrowded; after this exodus of superfluous tenants and of the unsuccessful colonists the population settles down to permanent residence, immigrants continue to arrive in small numbers but the old immigrants die out and are replaced by their children so that even without any emigration the number of immigrants rapidly grows less; the final stage is reached when the original stock of immigrants have all died out and the colony is inhabited by persons born within its boundaries and in this stage it ceases to bear the distinctive marks of a colony and begins to rank with the old districts in its effect on migration. Each stage except the last is temporary and the migration which accompanies it is peculiar to the time and is not a permanent feature of provincial movements of population.

The exact operation of these processes is somewhat obscured by the fact that the different colonies are not coterminous with districts, for which alone census statistics are available. Montgomery and Sheikhupura contain much land colonised during the last decade but both also include some land which was irrigated and colonised before the decade had commenced; separate statistics for Sheikhupura before the last census are not available and it has to be considered in conjunction with Gujranwala. These districts show the first stage in the process of colonisation; in Montgomery the excess of immigrants from the non-colony districts over the emigrants to them has risen from 10,433 to 84,491 in the decade and allowing for deaths since 1911 probably 76,141 of the present

immigrants have arrived during the decade; in Gujranwala and Sheikhupura the excess has risen from 74,272 to 136,172 during the decade and probably 76,287 of the present immigrants are of recent arrival. Part of Multan has also been first colonised since 1911, but so much of it was previously irrigated that the figures are much less striking; in it the "balance of migration" from non-colony districts has risen from 26,498 to 42,032 during the decade and the actual immigration during the decade has resulted in the presence in 1921 of 20,834 new colonists.

The next stage in colonisation is illustrated by Shahpur; part of this had already been colonised in the previous decade and the last ten years have witnessed the process of consolidation and the exodus of superfluous tenants and labourers. The full effect is obscured because a large part of the district is not colony land and the migration to and from that part follows different laws, even so the statistics give striking proof of the theory; the balance of migration in favour of this district from the non-colony districts has dropped from 83,762 in 1911 to 38,965 in 1921, this decline of 44,797 is partly accounted for by deaths amongst the old colonists but allowing for this it is still probable that actual emigration during the decade has resulted in the enumeration of 28,043 persons elsewhere in 1921 who were inside the district in 1911.

The colonisation of Lyallpur took place before the census of 1901 which naturally revealed an enormous increase in population entirely due to immigration; the census of 1911 showed a decrease in the number of immigrants far larger than could be caused by deaths and must have been partly attributable to actual emigration; the present census shows a drop in the balance of migration from 392,374 to 322,472 which is a decrease of no less than 69,902, yet this decrease is more than accounted for by the normal mortality amongst old colonists and it is probable that actual immigration exceeded emigration during the decade by about 9,000 persons of whom 8,573 now survive.

These statistics illustrate the three intermediate stages in colonisation, but it must be noticed that the figures for the Jhang district do not fit in with the rules enunciated, this district is however exceptional in many ways and the migration between it and non-colony districts has been too small to form the basis of any conclusive arguments.

These remarks apply to the migration between the six true colony districts and the non-colony districts; the figures for migration between the six districts themselves are even more striking; during the decade Shahpur has lost large numbers to Gujranwala, Montgomery and Jhang, and a few to Multan, whilst practically no movement has taken place between it and Lyallpur; Lyallpur has lost to every district except Jhang; Montgomery, Sheikhupura and Multan have all gained heavily from the older colonies whilst amongst themselves the only considerable movements have been from Montgomery to Sheikhupura and from Multan to Montgomery.

The actual figures for the gain in the population of 1921 due to the migration of the decade are as follows:—

	Canal Colonies.	Other British Districts.	Punjab States.	Outside Province.	Total.
Lyallpur	—22,451	3,573	—5,559	1,731	—17,706
Shahpur	—13,215	—28,043	244	—1,278	—42,292
Gujranwala and Sheikhupura	36,903	76,287	1,363	4,723	119,276
Multan	6,861	20,834	—3,683	—1,024	22,988
Montgomery	3,289	76,141	4,718	4,302	88,450
Jhang	—11,387	1,663	—178	437	—9,465
Total	0	155,455	—3,095	8,891	161,251

It will be seen that Shahpur has lost both to colony and to non-colony areas, Jhang and Lyallpur have lost to colony areas but have gained from non-colony areas, and the three new colonies have gained both from colony and non-colony areas. The gain of each colony from non-colony areas indicates its present force of attraction, but the loss of one colony to another is the result of two attractions in opposition; roughly we can say that the migration away from Lyallpur, Jhang and Shahpur represented by the first column of figures is an

exceptional feature of the decade due to the formation of new colonies, whilst all other figures are normal for these three districts; on the other hand all the figures for Montgomery, Sheikhupura, and Multan are abnormal features of the decade.

We can now turn to the effect of the canal colonies on the non-colony districts; in 1911 there was a balance of migration of 590,003 in favour of the former and by 1921 this had risen to 627,924, this constitutes an increase of 37,451 but allowing for deaths amongst the old colonists it is probable that no less than 155,455 of the new balance in favour of the colonies is due to migration of the decade. The figures in the margin show the birth-place per *mille* of the balance in 1911 and in 1921 and of the new colonists who have come in during the decade. The figures in the first two columns are very similar in the case of most districts, showing that the sum total of the attraction of the colonies has operated on these districts in much the same way since 1911 as before that year; there are however exceptions and these are particularly noticeable on reference to the last column of figures which show that Amritsar, Gujrat, Ludhiana, Kangra, Karnal and Dera Ghazi Khan have sent a far smaller proportion of migrants to the colonies during the last ten years than before; of these the last three have always sent so few as to render the effect on their population practically negligible; on the other hand Jullundur, Hoshiarpur, Lahore, Jhelum, Ferozepore, Mianwali, Muzaffargarh, Hissar, Gurgaon, Rawalpindi and Attock have increased their contributions to the colonies.

Birth-place.	1911.	1921.	New Colonists.
Sialkot ..	288	223	211
Amritsar ..	159	148	115
Jullundur ..	127	155	240
Gurdaspur ..	97	97	96
Gujrat ..	97	49	—96
Hoshiarpur ..	82	99	150
Ludhiana ..	51	40	8
Lahore ..	36	46	75
Jhelum ..	32	35	40
Ambala ..	30	30	29
Ferozepore ..	16	23	43
Mianwali ..	11	17	36
Muzaffargarh ..	9	10	18
Hissar ..	6	8	13
Kangra ..	3	1	—6
Rohtak ..	3	2	0
Gurgaon ..	3	4	7
Rawalpindi ..	3	5	10
Karnal ..	3	1	—4
D. G. Khan ..	2	1	—4
Attock ..	2	6	19
Simla ..	0	0	0

The majority of these changes can be ascribed to one reason which is the temporary migration which occurred at the end of the decade in consequence of the widespread failure of crops.

Taking the average matured area for the period 1910-11 to 1919-20 as a normal for the basis of comparison, the percentage of the normal area which was harvested in 1920-21 is shown in the marginal list; those districts which appear near the bottom of the list naturally supplied large numbers of temporary emigrants looking for employment, and out of the eleven districts which have supplied a greater number of colonists than usual seven appear at the very bottom of the list, the other four being Jullundur, Hoshiarpur, Lahore and Muzaffargarh. Residents of Jullundur, Hoshiarpur and Lahore have secured very large grants in the Montgomery district and this may account for the increase in emigration to the colonies though it is also possible that it has been temporarily increased owing to scarcity. The enhanced emigration from Muzaffargarh has been almost entirely towards the adjacent district of Multan, and, though the area cropped in each district bore much the same relation to the normal, yet it is quite certain that owing to failure of the inundation canals there was a certain amount of temporary emigration from the former to the latter.

Montgomery ..	125
Lyallpur ..	102
Jhang ..	96
Amritsar ..	93
Gurdaspur ..	87
Sheikhupura ..	87
Shahpur ..	85
Muzaffargarh ..	83
Jullundur ..	83
Multan ..	81
Ludhiana ..	78
Kangra ..	77
Lahore ..	77
Ambala ..	77
Gujrat ..	76
Simla ..	75
Hoshiarpur ..	72
Karnal ..	71
Rohtak ..	69
Gujranwala ..	67
D. G. Khan ..	67
Sialkot ..	65
Gurgaon ..	62
Ferozepore ..	59
Mianwali ..	58
Rawalpindi ..	42
Attock ..	26
Hissar ..	20
Jhelum ..	19

Reference to a map will show that Ludhiana and Amritsar are situated amongst districts where the failure was greater than in themselves, this being so it is natural that the inhabitants should regard their position as favourable and would resort less than usual to emigration; the falling off in emigration from Gujrat is clearly due to the fact of the introduction of new irrigation which caused

many persons who had previously sought more or less permanent labour in the colonies to return to their ancestral lands.

Summing up it is clear that Lyallpur, Jhang and Shahpur have lost many inhabitants and that Sheikhupura, Montgomery and Multan have gained many owing to the conditions peculiar to a decade which witnessed the colonisation of the latter three districts; and also that scarcity conditions in 1921 led to much temporary migration from Jhelum, Hissar, Attock, Rawalpindi, Mianwali, Ferozepore, Gurgaon and Muzaffargarh to the colonies; whilst variations in the acuteness of the scarcity led to less migration than usual from Amritsar and Ludhiana.

Scarcity conditions have affected the migration between non-colony districts themselves as well as between them and the colonies; and in the case of districts near the boundaries of the Punjab States and of other provinces it has also affected migration across the border, but in these last cases it is impossible to trace its influence as we have not got the agricultural statistics for the states and extra-provincial districts. Comparison of the balance of migration (*i. e.*, the number of immigrants minus the number of emigrants) in favour of each district in 1911 and 1921 gives an indication of the changes in the course of migration, and the effect of these changes on the population is best illustrated by giving this balance per *mille* of the 1911 population. For instance; in 1911 Hissar showed 136,396 immigrants and 116,814 emigrants and thus had a balance of migration of 19,582 in its favour but in 1921 the balance was 39,211 against it, so that the difference in the balance in the two years was—58,793 which amounts to —73 per *mille* of its population in 1911. Changes in the course of migration have therefore accounted for a change of —73 per *mille* in the population of the district since 1911.

The effect of changes in migration, calculated in this way, are shown in the following table which gives separate figures for migration with British districts of the Punjab, with Punjab States and with areas outside the province :—

Change in the balance of migration between 1911 and 1921 per *mille* of the total population of 1911.

	With Punjab British Territory.	With Punjab States.	Beyond the Punjab.	Total.
Montgomery	169	9	27	205
Gujranwala and Sheikhupura	114	1	5	120
Simla	114	39	—43	110
Gujrat	49	0	—3	46
Multan	24	—4	—4	16
Ludhiana	21	15	3	39
Amritsar	16	0	—5	11
Rawalpindi	13	0	15	28
Rohtak	10	4	31	45
Jhang	5	—1	0	4
Karnal	4	—6	—4	—6
Gurdaspur	4	—2	1	3
Ferozepore	1	—9	13	5
Dera Ghazi Khan	—2	—7	—3	—12
Ambala	—3	—4	—14	—21
Lahore	—4	0	—13	—17
Gurgaon	—6	2	19	15
Muzaffargarh	—6	—3	—1	—9
Kangra	—7	—11	1	—17
Attock	—8	—1	1	—8
Mianwali	—8	0	15	7
Sialkot	—12	1	—3	—14
Hoshiarpur	—17	1	—3	—19
Hissar	—27	—23	—23	—73
Jullundur	—30	—1	—6	—37
Jhelum	—32	1	—13	—44
Shahpur	—91	0	—1	—92
Lyallpur	—136	—11	—1	—148

The districts are arranged according to the figures in the first column, for it is only for British Territory that we have crop statistics which enable us to gauge the influence of the scarcity conditions. The position of the canal colonies in this statement has already been explained. Apart from these, and Simla, the migration from which is entirely artificial, and Gujrat which has been newly irrigated, it will be found that every district high on the list reaped

a higher percentage of a normal crop in 1921 than adjacent districts whilst the reverse is true of those districts low on the list. The only exception is found in Jullundur, which sent many grantees to Montgomery, and a few of the districts near the middle of the list in which the change in balance of migration with other districts has been very small. The table affords very striking proof of the fact that the main changes in the stream of migration in the two census years are due very largely to temporary migration resulting from the scarcity conditions which prevailed at the 1921 census.

Had we got figures showing the severity of the scarcity in the Punjab States and in districts of the surrounding provinces it is probable that reference to these and to a map would show that the figures in the second and third columns are as much due to variations in that scarcity as are those in the first column.

Summary of Causes Affecting Variations in Districts.

41. Turning to the second column of figures at the beginning of paragraph 38, which shows the percentage of increase in each district during the last decade, we can now see the effect of the conclusions arrived at in the last two paragraphs. In the group of districts at the head of that list we have seen that Montgomery, Sheikhupura and Multan owe a great deal of their increase to migration which is a feature peculiar to the decade which witnessed the first colonisation of large areas within them; on the other hand this same feature of the decade has had an opposite effect on Lyallpur and Shahpur in which there would have otherwise been larger increases. Shahpur has been passing through the adjustment stage of colony growth and has lost many superfluous labourers and unsuccessful colonists, its rate of increase has therefore been less during the decade than before and in all probability less than it will be in the near future. Lahore's rate of increase has been checked by extensive migration to Montgomery, but on the other hand it will be shown in Chapter II that it has been accelerated by an influx of immigrants from other districts to Lahore City. Multan being yet in the early stages of colonisation is likely to show a far greater rate of increase in the near future. Jhang has been affected, like Lyallpur, by the drain on its population caused by the newer colonies. In short, peculiar features of the decade account for the great differences in the rate of increase in these seven districts and but for these they would have shown much less wide variations.

In the next group each of the three districts suffered from extremely bad harvests in 1921 and there was much temporary emigration from them all, but in the case of Ferozepore this was nullified by temporary immigration from adjacent parts of Rajputana which suffered even more severely; Hissar in particular suffered so severely that instead of exercising its normal attraction on the residents of Rajputana and the United Provinces it actually sent emigrants to them in large numbers.

In the next group Mianwali whilst losing by exceptional emigration to the canal colonies gained by temporary immigration from the country to the west which suffered more severely from scarcity than it did itself; Muzaffargarh and Jhelum lost large numbers by temporary emigration in 1921 and had it not been for this would almost certainly have shown considerable increases instead of losses in population. Dera Ghazi Khan, though this is not borne out by recorded statistics, had also a bad year and lost by temporary emigration; but the main reason for its small rate of increase is to be found in the attraction exercised on its population by extensive newly irrigated lands in Bahawalpur State.

The nine districts in the next group do not appear to have been affected very considerably by peculiar features of the decade, but the five which show the greatest increase certainly owe part of that increase to temporary immigration from neighbouring districts during the scarcity of 1921; increase in Jullundur was checked by the grant of lands in Montgomery to members of its congested population; Sialkot whilst sending large numbers of emigrants to the canal colonies did not exceed its previous records in that direction, but it lost considerably more emigrants than usual to non-colony districts.

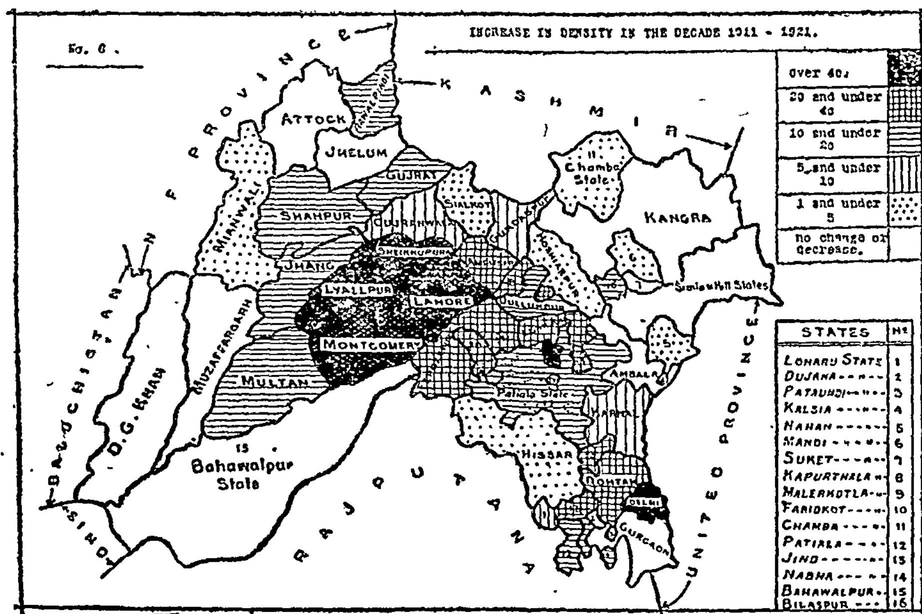
In the last group Simla gained at an artificially high rate merely owing to the presence of the town of Simla, the March population of which exceeded that of 1911 by a very large amount owing to the innovation in various Government departments of remaining at the summer headquarters throughout the year. Gujrat gained exceptionally owing to new irrigation which brought back

numerous emigrants who had sought employment in the canal colonies at a time when their own lands were dry and comparatively unproductive. Ambala lost by increased emigration, whilst Gurgaon lost more than any other district by epidemics of disease.

It is thus seen that the temporary features attending the close of the decade, and the colonisation which occurred during the decade, all tend to account for the cases where increase in population during the last decade does not appear to have been in accordance with that which would have been caused by pressure on resources acting alone. Unfortunately it is quite impossible to make any numerical estimate of that part of the migration of the decade which was temporary or due to changes in colonisation; were it possible to do so we could eliminate it and then get further figures indicating where to look for further peculiar influences of the decade; without it it is scarcely logical to look further as it in itself may be sufficient to account for all the peculiarities noticed in paragraph 38. It may perhaps be useful however to indicate how the increased attraction of the large towns has affected the population of the various districts. We have figures for immigrants to towns but not for emigrants from them; the marginal statement shows the excess of the immigrants recorded in 1921 over those recorded in 1911 to the cities and towns of Lahore, Amritsar, Multan, Rawalpindi, Ambala, Jullundur, Sialkot and Ferozepore; immigrants from the districts in which each town is situated have not been included as they have no effect on the population of such districts. It is interesting to observe the rival influences of pressure on population and proximity to the towns which have operated to produce this change in the urban population, but detailed comments must be reserved for Chapter II.

Kangra ..	3,096
Hoshiarpur ..	2,856
Gujrat ..	2,619
Gurdaspur ..	1,892
Jullundur ..	1,685
Jhelum ..	1,557
Sialkot ..	1,315
Lyallpur ..	1,239
Multan ..	800
Attock ..	681
Rawalpindi ..	637
Gujranwala and Sheikhupura	507
Gurgaon ..	460
Muzaffargarh ..	434
Ambala ..	413
Mianwali ..	181
Hissar ..	177
Rohtak ..	30
Shahpur ..	6
Karnal ..	—114
Ludhiana ..	—209
D. G. Khan ..	—359
Simla ..	—368
Montgomery ..	—410
Jhang ..	—554
Lahore ..	—801
Ferozepore ..	—2,559
Amritsar ..	—9,647

riations nsity. 42. The increase in density per square mile is indicated in the following map, the striking feature about which is that it shows that the changes in density during the last decade have been characterised by a great increase in the central parts of the province accompanied with little change or with actual decrease in the outlying districts :-



The actual change in the number of persons per square mile is a somewhat misleading guide to variations in population; for instance Montgomery, Sheikhupura, Lyallpur and Lahore have all gained over forty persons per square mile

during the decade but their populations have shown very different features in their increase; Montgomery had an extremely light population in 1911 and its gain of 46 persons to the mile has been caused by a very rapid increase and yet has still left the countryside sparsely inhabited; Lahore with a much denser population to start with has needed a comparatively small increase in it in order to give it 48 more persons to the mile; whilst Sheikhupura and Lyallpur show intermediate rates of increase. If however the change in density is shown as an increase per cent. on its initial amount it becomes synonymous with change in population. In the following marginal table the first and second columns of figures show the change in density expressed in these two ways and it will be noticed that the second column is identical with the statement given at the beginning of paragraph 38. The third and fourth columns show the change in density of the rural population per square mile of cultivated area; it is to a comparison of columns two and four that attention should be paid as the latter shows how far the increase per cent. in mean density (or in population) is nullified by a corresponding or even greater increase in cultivation; for instance in Montgomery, Shahpur, Jhang, Mianwali and Gujrat whilst population and mean density have increased the incidence of the rural population on the cultivated area has actually decreased owing to an extension of cultivation which more than balances the increase. In Simla the apparent increase in mean density is entirely due to urban growth and beyond the limits of the one town the density of the population has decreased very considerably. The reverse conditions are observable in Attock, Dera Ghazi Khan, Ambala and Gurgaon in which the bad seasons of 1921 caused a restriction of cultivation so great that a decline in population was accompanied by an increase in its incidence on the cultivated area; in these districts it is clear that even though there was temporary emigration in 1921 it was insufficient to leave the remaining population with means of subsistence equal to that which they enjoyed in 1911.

Changes in Density between 1911 and 1921.

District.	Mean density per square mile.		Density of rural population per cultivated square mile.	
	Actual.	Per cent.	Actual.	Per cent.
Montgomery ..	46	42·3	—71	—14
Sheikhupura ..	41	19·8	0	0
Lyallpur ..	40	15·6	21	5
Lahore ..	48	13·0	107	29
Shahpur ..	17	11·6	—20	—5
Multan ..	13	9·3	—56	—11
Jhang ..	13	8·7	—9	—2
Ferozepore ..	32	14·4	45	18
Hissar ..	3	1·5	7	4
Attock ..	—2	—1·3	9	3
Mianwali ..	3	4·9	—20	—5
Muzaffargarh ..	0	—0·2	13	2
D. G. Khan ..	—4	—6·6	86	21
Jhelum ..	—12	—6·7	—4	—1
Ludhiana ..	35	9·7	66	17
Rohtak ..	20	8·0	58	17
Amritsar ..	30	5·5	51	8
Rawalpindi ..	10	3·9	44	8
Karnal ..	9	3·4	39	9
Gujranwala ..	8	2·9	0	0
Jullundur ..	15	2·5	40	6
Gurdaspur ..	8	1·8	27	4
Sialkot ..	4	*0·7*	*19*	*3*
Simla ..	68	17·9	—41	—4
Gujrat ..	14	4·6	—30	—5
Hoshiarpur ..	4	1·0	38	5
Kangra ..	0	—0·6	57	6
Ambala ..	—5	—1·4	16	3
Gurgaon ..	—22	—6·6	10	3

These cases are the most striking for in them an increase in mean density has been accompanied by a decrease in the incidence of the rural population on the cultivated area which provides its means of subsistence, or *vice versa*; but in a less degree every difference between the figures in the second and fourth columns shows the same facts; in Lyallpur increase in population did not keep pace with increase in cultivation, in Jhelum a decrease in cultivation was accompanied by a very far greater decrease in population, and in all the districts not yet mentioned the increase in population was not so great as the increased pressure on resources owing to those resources being less in 1921 than in 1911.

Future Variations

43. No profit can be derived from an attempt to forecast the future movements of anything so susceptible to innumerable and fortuitous influences as the population of districts, yet the whole course of observation and argument given in this section tends to show that, apart from temporary disturbing causes, there is a normal difference in the rates of increase in the different districts of the Punjab. In paragraph 18 the various districts were classified according to their apparent present capacity of supporting an increased population, in paragraph 38 it was shown that the past increase over a long period has been roughly in

accordance with that present capacity, in paragraphs 39 to 42 the reason for the increases in population during the past decade not being in accordance with that capacity has been found in various facts such as epidemic disease, canal colonisation and scarcity at the time of the last census which were all peculiar features of the decade. It therefore appears reasonable to conclude that the variations in the next decade will also reflect the varying capacity to support increased population mentioned in paragraph 18, except in so far as peculiarities in conditions may operate to prevent that result. It is impossible to foretell the chances and changes of the next ten years, but a few coming events have already cast their shadows before them and may be mentioned as influences likely to affect the future spread of population. In the canal colonies, Lyallpur is likely to experience little change in her rate of increase though it must inevitably diminish as pressure becomes felt; Shahpur having passed through the stage of consolidation and ejection of superfluous labour is likely to show a somewhat augmented rate of increase; Sheikhupura, now fully colonised, is likely to follow the example afforded by Shahpur in this last decade and to lose many of its immigrants and therefore to show a lessened rate of increase; in Montgomery and Multan the present rapid increase is likely to continue for some years of the coming decade before being replaced by the slower rate which accompanies the stage of colonisation to which I have referred as consolidation.

Schemes for fresh irrigation from the Sutlej, if they are completed within the decade, should lead to great increases in Ferozepore and Bahawalpur; and similarly if the Bakra Dam, which has so long been mooted, comes into operation it will enable the south-eastern districts to support a larger population which will probably be brought into being by increased immigration from outside the province.

Increased industrialism is likely to lead to an increase of urban population, of which there are already a few tentative signs, and may lead to a movement of population towards Lahore, Amritsar and other large centres.

And finally the return of the temporary emigrants of 1921 should give an apparently accelerated rate of increase in all the districts which suffered most severely from the scarcity prevalent at the time that this census was taken.

Section VI.—Houses and Families.

scription njab es.

44. The types of buildings in which the various races of the Punjab reside are so numerous and varied that it is extremely difficult to give a definition of the word "house" which will apply to even approximately the same unit in different parts of the country. Undefined, the word may be applied equally well to a collection of buildings inhabited by large numbers of persons connected by very indefinite social ties and only characterised as a separate unit by the existence of either a common courtyard or common approach, or to every individual room of one compact building. The main difficulty arises from the custom which obtains in many parts of the province of the various members of a family separating from each other in some particulars and not in others; such separation may be complete in every way and involve separate establishments housed in completely separate buildings and owning separate property, it may however involve the mere separation of feeding and cooking arrangements whilst the different members continue to use parts of the same ancestral building and to own their property jointly; the word "house" at once begins to be confused with the word "family" and both are extremely indefinite terms.

In the compact villages of the south-east it is usual to find a large number of branches of the same family occupying one ancestral group of buildings situated round a common courtyard, but that group may consist of perfectly distinct buildings and the lives of the branches residing in each may be entirely separate and independent; the group of buildings however represents what was once the house and common residence of a single simple family, and it is often impossible to draw the dividing line between a group of houses and a house formed of a group of buildings. In towns the difficulty is even greater, whole lines of buildings may open on to one common courtyard or on to a semi-public lane or alley possessing only one approach from the public streets; here any definition based on the possession of a common courtyard or entrance is manifestly absurd as both the buildings and the people inhabiting them may be entirely independent;

on the other hand a single compact building may be composed of flats and rooms having separate entrances from the public highway and inhabited by persons who have no relations with one another.

Definitions based entirely on structural features or entirely on the connection between the inhabitants are equally faulty, and, in connection with the census, it has always been recognised that it is impossible to lay down a definition which will be of any use in statistics; all attempt to define the house as a statistical unit has therefore been abandoned and the definition adopted has been devised with the sole purpose of ensuring that the enumerating staff should overlook no building likely to have inhabitants and should not include in one "house" a group of buildings so large as to make the complete enumeration of its inhabitants a matter of difficulty. The definition adopted will be discussed in the next paragraph, but before coming to it it is best to give a rough idea of the types of buildings which are met with in various parts of the province.

As a general rule the type of house follows the type of village; in the eastern plains, where compact villages sprang up on account of the necessity for mutual protection, the same consideration led to the various branches of a family hanging together and living round a common courtyard with a single entrance; the necessity of mutual protection has disappeared but the type of village has been fixed and lack of space obliges successive branches of the family to go on extending and enlarging the old buildings even though they may separate from each other by the establishment of individual cooking arrangements.

In the west, where the villages are smaller and more scattered, family dissensions lead not only to the separation of cooking arrangements but to the erection of entirely separate buildings and a discontinuance of all mutual relations except perhaps in connection with the ownership and cultivation of land; here houses are smaller and more easily distinguishable, most have their own courtyard but the buildings are for joint use as much as courtyard.

In the hills, where people live in scattered hamlets, each little family builds its own house near its fields and large groups of buildings inhabited by any but the closest relations are uncommon.

The actual structure of the houses has been fully described in previous census reports but has little bearing on the subjects to be dealt with in this report; suffice it to say that the material used depends on the locality; mud is the most common material and may be used in the form of unbaked bricks, unshaped clods, or roughly moulded slabs; wood and stone are largely used in the foot-hills; thatch and matting in the riverside areas of the plains. An interesting series of names for the previous types of house common in the Montgomery District (before colonisation) is mentioned in Mr. Rose's report of 1901 as illustrating the varying extent to which those who used them were of nomadic habits, these are—*kotha* built of mud walls and roof, *khudi* of mud walls and thatched roof, *jhugi* of walls of matting with thatched roof, *chhann* with both walls and roof of thatch, and *pakhi* which is a mere temporary shed of screens.

During the last decade there has not been a vast change in the type of houses built, but it is noticeable that burnt bricks are being increasingly employed and that buildings are becoming more and more commodious throughout the canal colonies; in towns the burnt brick is becoming an almost universal building material and, though in walled towns lack of space has led to extensions in an upward direction and to the construction of more and more additional stories, there is a very marked tendency amongst the educated and more wealthy classes to resort to buildings of the European bungalow type outside the limits of the more congested areas.

Definition of "House" for Census Purposes.

45. In 1881 the distinguishing feature insisted upon in the definition of a "house" was the possession of a common courtyard, a fact which led to the selection of inconveniently large units for enumeration in the south-eastern parts of the province; in 1891 no rigid definition was attempted but the main points insisted on in a long series of instructions were:—the situation within a common enclosure, the existence of a common courtyard with express exception of lanes and semi-public spaces in towns, and the exception of outlying huts and shelters; in 1901 the definition was made even more wide and practically came to being "every place likely to be occupied" and the actual selection of individual units was left largely to the discretion of the local census officers.

In 1911 a far more rigid definition was attempted and this has been followed at the present census and is contained in the instructions issued to the enumerating staff as follows :—

In rural tracts.—" House " means a structure occupied by one commensal family with its resident dependents, such as widows and servants. Such detached structures, as have no hearth, but are likely to have one or more persons sleeping therein on the night of the final enumeration, should be treated as separate houses, so that no person may escape enumeration.

In towns and cities.—" House " means a structure intended for the exclusive residence of one or more commensal families apart from other residents of the street or lane, and includes serais, hotels and the like, when they are not large enough to form blocks ; shops, schools, and other institutions, having no hearth, but which may possibly have some one sleeping therein on the night of the final enumeration should be numbered as separate houses.

It will be seen that, in rural tracts, the old method of treating all buildings with a common courtyard as one house has been abandoned in favour of the separation of each part of a group of buildings which has a separate *chulha* or hearth. The possession of a separate *chulha* is universally recognised as the distinguishing mark of the partial separation of a branch of a family from the other branches and parent stem ; though the separation may be incomplete yet once it has taken place the branch is no longer a member of what is termed a confocal group and its interests and activities rapidly diverge from those of the other branches. Hence in rural areas the definition of house is based on the degree of separation amongst the people residing in it and practically amounts to the residence of a separate family.

On the other hand such a definition would be impossible to apply in towns and cities and here the distinguishing mark of a house has been made to rest on the nature of the structure, though it also includes a modification based on nature of the inhabitants.

This definition has survived the test of two censuses and has been found to fulfil the two main requirements which are:—

That the definition should cover all buildings in which it is likely that people may be found on the census night.

That the inhabitants of the unit selected should be so closely connected that their final enumeration can be completed by reference to one man and without moving from place to place.

But there is one point in which the definition fails and that is that it leads, on account of unintelligent zeal on the part of enumerators, to the selection of large numbers of places as " houses " which are most unlikely to be inhabited on the census night. This fault not only leads to unnecessary labour in house-numbering and patrolling but, as the directions provide for the enumeration as if at his residence of a man who is temporarily absent guarding the crops or attending to his well, the treatment of shelters amongst the crops and at the wells as houses may lead to double enumeration.

Num- Houses in and Areas.

46. The number of occupied houses according to the present census is 5,532,305 in the Punjab and 114,683 in Delhi, and is an increase of only 241,973 over those returned in 1911. The marginal figures show the average number of houses per square mile recorded at the last five censuses, but, owing to the change in definition referred to in the last paragraph no comparison can be established except between the last two figures ; the small increase in the number of houses is shared unequally by the four natural divisions as can be seen from Subsidiary Table VII ; of these, the sparsely populated Himalayan tract naturally has the most widely separated houses and only has 17·5 houses to the square mile as opposed to 70 in the densely populated Sub-Himalayan districts. The changes in the natural divisions since 1911 require little comment, the slight decline in the number of houses in the Sub-Himalayan tract is so small as to be within the margin of error due to individual variations in the interpretation of the definition, and the only feature of note is that the increase in the North-West Dry Area with its large canal colonies has been so small.

1881 ..	25
1891 ..	27
1901 ..	30
1911 ..	40
1921 ..	41

The towns of the Punjab contain on the average 3,174 houses as against 109 in the average sized village ; in Delhi the city and its suburbs include no less

than 74,188 inhabited houses whilst the outlying villages contain an average of 129.

It is to be regretted that the enumerators treated so many places as houses which were not really likely to be occupied on the census night,—in the preliminary returns over eight million houses were entered and on the census night only 5·6 millions were inhabited; though the temporary migration due to the drought at the time of the census must have left many houses unoccupied it is impossible to gauge the number which were temporarily deserted owing to the inclusion of most unlikely places for human habitation in the preliminary returns.

Average Number of Residents in a House.

47. Throughout the two provinces the average number of residents in each house is remarkably constant, and amounts to 4·3 in Delhi and in the Sub-Himalayan tract, 4·5 in the Himalayan Districts, 4·6 in the Indo-Gangetic Plain and 4·8 in the North-West Dry Area. As the definition of house in rural areas practically ensures that the residents will form one family these figures may also be taken as representing the size of normal families and they show at once how far removed the Punjab is from other parts of India in its family customs; in it the Hindu joint family system is practically non-existent and the enormous undivided families of Bengal and elsewhere are unknown, the family almost tallies with the European separate family of father, mother and children.

The remarkable constancy of the number of residents to a house is maintained amongst the individual districts; Lyallpur shows 5·5 persons to a house and Jhelum only 3·8 but every other district has an average of between four and five people to the house.

Another remarkable feature of the figures for houses is that, in spite of the difference in definition, the number of residents to a house in urban areas (4·4) is very near that in rural areas (4·6).

The Family.

48. The constitution of families in the Punjab shows every possible gradation from the individualistic systems common in Europe, where every married man with his wife and young unmarried children form a separate family, to the true Hindu joint family system, in which all members of a family connected together by descent from a distant ancestor live together, own their property in common and pool all their individual earnings in the joint coffer for unchallenged administration by the head of the family; but, except in rare cases, the family resembles the former type far more closely than the latter.

In rural tracts, if the father's house is a small one, and it usually contains but one living room, the marriage of a son necessitates the immediate building of another room; and, though he may continue to use the same courtyard and even the same hearth, it is generally found that within a short time the dissensions of the womenfolk, who have not been brought up from infancy amongst the family, make life inconvenient so that, sooner or later, a separate hearth is established or, more commonly, an entirely separate establishment is set up.

The result is that throughout the country the family using one hearth almost invariably consists of but father, mother and unmarried children with possibly a few dependents of a previous generation; but in the east, where village sites are compact and building space is very limited, such families have much more tendency to live in close association in one group of buildings than in the west, where there are fewer difficulties in the way of erecting separate houses.

Considerations of space do not form the only reason for variety in the degree of separation common from village to village and from district to district; as a rule the higher and more orthodox castes of Hindus tend to greater community in living than those whose traditions are less restrictive, and far more than Musalmans who live much more individualistic lives throughout the province; this fact is partly due to the greater survival of ancient customs amongst the orthodox Hindus but is also largely due to the fact that the proprieties observed by all civilised races discountenance close association between persons who are not prevented from marriage by ties of relationship, so that the existence of strict exogamous customs amongst high caste Hindus permits a wider circle of relations to live together than would be possible amongst peoples where even close relationship is no bar to marriage.

Whilst the large undivided family is practically unknown in the province, its influence can be seen in business relations and in the forms and conditions of

agricultural tenure; but even the continuation of joint ownership and of joint endeavour in business and agriculture is more a matter of convenience than a result of the force of tradition.

In towns and cities, where the want of building space prevents the easy separations of rural life, Hindu families almost invariably show a far greater degree of the joint constitution; and, amongst trading classes, the existence of established business firms controlled entirely by the family has still further aided the survival of the ancient systems. But even amongst these old family firms the ties are beginning to change from those of a joint family, whose property and earnings are common and subject to the control of the head of the family, to those of mere partnership, where the capital is held in shares and the profits are subject to periodical distribution.

SUBSIDIARY TABLE I.

Density, Water-supply and Crops.

District or State and Natural Division.	Mean density per square mile in 1921.	Percentage of total area.		Percentage to cultivable area of		Percentage of gross cultivable area which is irrigated.	Normal rainfall in inches.	Percentage of gross cultivated area under			
		Cultivable.	Net cultivated.	Net cultivated	Double cropped.			Rice.	Wheat.	Pulses.	Other crops.
1	2	3	4	5	6	7	8	9	10	11	12
PUNJAB ..	183	65	39	59	8	40	27·99	3·9	28·3	12·3	55·5
I. Indo-Gangetic Plain West.	291	90	69	76	9	32	23·44	2·3	18·4	17·6	61·7
1. Hissar ..	157	95	72	75	2	10	15·83	·3	2·9	33·8	63·0
2. *Loharu State* ..	93	92	68	74	..	..	15·40	..	..	..	100·0
3. Rohtak ..	265	93	78	83	8	22	19·53	..	9·6	20·4	70·0
4. *Dujana State* ..	284	93	73	81	8	..	24·09	..	5·7	11·9	82·4
5. Gurgaon ..	301	85	68	79	8	13	25·22	..	7·3	16·9	75·8
6. *Pataudi State* ..	348	85	68	79	8	..	21·46	..	5·7	·2	94·1
7. Karnal ..	265	86	49	57	7	31	29·75	6·0	19·6	17·6	56·8
8. Jullundur ..	575	89	75	84	22	49	26·85	·3	33·9	10·5	55·3
9. *Kapurthala State* ..	475	89	75	84	22	26	53·76	1·7	42·2	16·4	39·7
10. Ludhiana ..	391	91	78	86	12	33	25·97	·2	27·2	20·6	52·0
11. *Malerkotla State* ..	481	94	85	91	9	22	20·0	..	14·3	16·1	69·6
12. Ferozepore ..	256	94	81	86	8	40	17·17	1·1	24·4	33·7	40·8
13. *Faridkot State* ..	236	95	91	96	..	..	17·5	..	24·7	·1	75·2
14. *Patiala State* ..	252	89	67	74	7	16	28·98	1·1	11·3	5·4	82·2
15. *Jind State* ..	245	93	68	73	3	13	23·42	·6	6·5	7·5	85·4
16. *Nabha State* ..	284	97	85	88	9	..	23·42	·2	12·4	7·1	80·3
17. Lahore ..	420	87	64	73	14	74	17·86	1·8	31·2	15·0	52·0
18. Amritsar ..	583	87	71	82	24	68	24·17	4·5	33·4	9·9	52·2
19. Gujranwala ..	270	85	54	63	7	69	23·37	15·1	36·5	14·9	33·5
20. Sheikhupura ..	247	93	54	57	7	83	15·07	10·5	36·7	10·5	42·3
II. Himalayan— ..	79	24	14	63	29	23	57·65	14·2	32·6	6·0	47·2
21. *Nahan State* ..	117	53	12	57	21	8	51·7	7·7	33·4	..	58·9
22. Simla ..	449	53	14	27	15	6	62·56	7·7	33·4	..	58·9
23. *Simla Hill States* ..	56	30	17	57	21	32	51·3	6·9	28·4	13·8	50·9
24. *Bilaspur State* ..	219	50	29	58	25	95	56·93	8·3	35·2	14·7	41·8
25. Kangra ..	77	16	9	56	31	23	74·05	15·3	33·5	1·9	49·3
26. *Mandi State* ..	154	22	19	86	42	13	61·22	21·1	31·9	4·3	42·7
27. *Suket State* ..	129	22	19	86	42	13	53·7	21·1	31·9	4·3	42·7
28. *Chamba State* ..	44	22	19	86	42	13	49·73	21·1	31·9	4·3	42·7
III. Sub-Himalayan— ..	300	65	49	74	11	20	30·65	4·2	40·1	6·3	49·4
29. Ambala ..	362	73	58	79	15	6	31·67	8·7	27·1	7·5	56·7
30. *Kalsia State* ..	305	61	57	94	11	2	38·72	13·4	25·8	5·5	55·3
31. Hoshiarpur ..	413	69	40	71	23	10	35·41	3·5	33·9	11·6	51·0
32. Gurdaspur ..	451	80	66	82	15	27	33·97	6·9	35·0	4·6	53·5
33. Sialkot ..	522	89	70	78	15	45	32·14	8·3	42·6	2·3	46·8
34. Gujrat ..	322	82	61	74	7	41	25·98	2·2	40·2	8·4	49·2
35. Jhelum ..	172	49	36	72	7	4	25·61	·1	48·7	3·8	47·4
36. Rawalpindi ..	281	52	39	75	7	2	32·38	·2	41·9	·9	57·0
37. Attock ..	124	49	33	68	5	7	19·94	..	47·8	8·1	44·1
IV. North-West Dry Area.	108	64	24	37	4	77	9·07	3·8	38·0	8·2	50·0
38. Montgomery ..	154	88	34	39	4	89	10·09	2·2	33·4	5·8	58·6
39. Shahpur ..	161	73	37	43	4	69	14·65	·3	37·2	11·8	50·7
40. Mianwali ..	66	82	17	21	5	10	11·80	·2	34·9	28·4	36·5
41. Lyallpur ..	301	91	68	75	13	93	13·13	·7	39·0	9·1	51·2
42. Jhang ..	165	90	31	35	4	83	10·05	·2	44·9	4·9	50·0
43. Multan ..	150	89	31	35	3	90	6·62	2·9	38·7	4·3	54·1
44. *Bahawalpur State* ..	52	14	12	87	5	79	3·63	16·0	36·7	3·1	44·2
45. Muzaffargarh ..	94	87	17	20	2	76	5·76	7·7	45·5	6·6	40·2
46. Dera Ghazi Khan ..	63	74	16	21	1	54	5·94	10·7	32·3	4·4	52·6
DELHI ..	823	64	56	87	13	23	27·52	..	16·4	12·4	71·2
I. Indo-Gangetic Plain West.	823	64	56	87	13	23	27·52	..	16·4	12·4	71·2
1. Delhi ..	823	64	56	87	13	23	27·52	..	16·4	12·4	71·2

Note.—Figures in column 2 have been calculated from survey area figures, as given in Imperial Table 1. Figures in columns 3 to 7 and 9 to 12 for British Districts have been calculated from areas given in the agricultural statements for 1919-20, and those for States from figures supplied by Census Superintendents. Rainfall recorded in column 8 is that recorded at the headquarters of Districts and States, and is an average for all years for which a record exists; rainfall figures recorded for natural divisions and for the Punjab, being averages of those for units, is meaningless. In the following cases figures have been computed from statistics for neighbouring places:—

Columns 3 to 6.—Pataudi, Patiala, Nahan.
Column 4.—Dujana, Kapurthala.
Columns 9 to 12.—Nahan, Mandi, Chamba.
Column 8.—Dujana, Jind, Nabha, Bilaspur.

SUBSIDIARY TABLE II.

Distribution of the Population classified according to Density.

Province or Natural Division.	*Tahsils with a population per square mile of*											
	Under 150.		150—299 (inclusive).		300—449 (inclusive).		450—599 (inclusive).		600—749 (inclusive).		750 and over.	
	Area.	Population (000's omitted).	Area.	Population (000's omitted).	Area.	Population (000's omitted.)	Area	Population (000's omitted).	Area.	Population (000's omitted).	Area.	Population (000's omitted.)
1	2	3	4	5	6	7	8	9	10	11	12	13
PUNJAB ..	44,002 (37·99)	3,430 (13·66)	45,635 (39·40)	10,389 (41·39)	18,591 (16·05)	6,869 (27·37)	5,525 (4·77)	2,832 (11·28)	867 (·75)	615 (2·45)	1,208 (1·04)	966 (3·85)
I. Indo-Gangetic Plain West ..	1,862 (4·90)	202 (1·77)	22,301 (58·72)	5,291 (46·22)	10,504 (27·65)	3,790 (33·11)	1,716 (4·52)	908 (7·93)	390 (1·03)	290 (2·53)	1,208 (3·18)	966 (8·44)
II. Himalayan ..	11,658 (73·14)	766 (44·07)	4,200 (26·35)	927 (53·34)	32 (·20)	10 (·58)	.. ..	.. ..	49 (·31)	35 (2·01)	.. ..	.. ..
III. Sub-Himalayan	3,571 (18·60)	339 (5·80)	6,174 (32·15)	1,343 (23·0)	5,222 (27·19)	1,943 (33·28)	3,809 (19·83)	1,924 (32·95)	428 (2·23)	290 (4·97)	.. ..	.. ..
IV. North-West Dry Area ..	26,911 (63·02)	2,123 (34·93)	12,960 (30·35)	2,828 (46·54)	2,833 (6·63)	1,126 (18·53)	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
DELHI (Indo-Gangetic Plain West) ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	593 (100·0)	488 (100·0)

NOTE.—The figures within brackets show the percentages of the total area and population.

SUBSIDIARY TABLE III.

Variation in relation to Density since 1881.

District or State and Natural Division.	Percentage of variation Increase (+). Decrease (—). 1911 to 1921.	1901 to 1911.	1891 to 1901.	1881 to 1891.	Percentage of variation 1881 to 1921.	Mean density per square mile. 1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB	+ 5·5	— 2·4	+ 6·3	+ 10·2	+ 20·7	183	174	176	167	152
I. Indo-Gangetic Plain West—	+ 6·8	— 9·5	+ 5·6	+ 10·3	+ 12·5	291	273	301	285	259
1. Hissar	+ 1·5	+ 3·0	+ ·7	+ 15·4	+ 21·5	157	154	150	149	129
2. *Loharu State*	+ 10·9	+ 22·1	— 24·4	+ 46·4	+ 49·9	93	84	69	91	62
3. Rohtak	+ 8·0	— 14·3	+ 6·9	+ 5·3	+ 4·3	265	245	286	267	253
4. *Dujana State*	+ 1·4	+ 5·4	— 8·6	+ 12·9	+ 10·3	284	280	266	291	257
5. Gurgaon	— 6·6	— 13·4	+ 10·9	— ·2	— 10·5	301	323	372	336	337
6. *Pataudi State*	— 7·4	— 10·9	+ 15·4	+ 6·5	+ 1·4	348	376	422	365	343
7. Karnal	+ 3·5	— 9·5	+ 2·6	+ ·8	— 3·2	265	256	283	276	274
8. Jullundur	+ 2·6	— 12·6	+ 1·1	+ 14·9	+ 4·2	575	560	641	634	552
9. *Kapurthala State*	+ 6·0	— 14·7	+ 4·9	+ 18·6	+ 12·5	475	448	526	501	422
10. Ludhiana	+ 9·8	— 23·2	+ 3·8	+ 4·8	— 8·3	391	356	464	447	426
11. *Malerkotla State*	+ 12·9	— 8·2	+ 2·3	+ 6·6	+ 13·0	481	426	464	454	425
12. Ferozepore	+ 14·4	+ ·3	+ 8·1	+ 18·5	+ 46·9	256	224	223	207	174
13. *Faridkot State*	+ 15·6	+ 4·3	+ 8·6	+ 18·6	+ 55·3	236	204	196	180	152
14. *Patiala State*	+ 6·5	— 11·8	+ ·8	+ 7·9	+ 2·2	252	237	269	266	247
15. *Jind State*	+ 13·4	— 3·6	— ·9	+ 13·9	+ 23·3	245	216	224	226	198
16. *Nabha State*	+ 5·8	— 16·5	+ 5·4	+ 8·0	+ ·6	284	268	321	305	282
17. Lahore	+ 13·0	— ·4	+ 11·7	+ 17·0	+ 47·1	420	372	374	334	286
18. Amritsar	+ 5·5	— 14·0	+ 3·1	+ 11·1	+ 4·0	583	553	643	623	561
19. Gujranwala	+ 3·0	— 18·1	+ 11·8	+ 14·1	+ 7·6	270	262	320	286	251
20. Sheikhupura	+ 19·9	+ 1·8	+ 28·3	+ 16·1	+ 81·6	247	206	203	158	136
II. Himalayan—	+ ·8	+ 2·0	+ 3·2	+ 6·9	+ 13·4	79	78	77	74	69
21. *Nahan State*	+ 1·4	+ 2·1	+ 9·3	+ 10·5	+ 25·0	117	116	113	104	91
22. Simla	+ 17·9	— 2·6	+ 9·3	+ 2·5	+ 28·6	449	381	391	357	349
23. *Simla Hill States*	— 1·5	+ 4·3	+ 7·2	+ 10·7	+ 22·0	56	57	54	51	46
24. *Bilaspur State*	+ 5·3	+ 2·5	+ 1·0	+ 6·0	+ 13·2	219	208	203	205	193
25. Kangra	— ·6	+ ·3	+ ·7	+ 4·4	+ 4·8	77	77	77	76	73
26. *Mandi State*	+ 2·2	+ 4·1	+ 4·3	+ 13·5	+ 25·9	154	151	145	139	123
27. *Suket State*	— 1·1	+ ·5	+ 4·3	— ·1	+ 3·5	129	131	130	125	125
28. *Chamba State*	+ 4·4	+ 6·3	+ 3·0	+ 7·1	+ 22·5	44	42	40	39	36
III. Sub-Himalayan—	+ ·7	— 5·3	— 1·4	+ 9·0	+ 2·4	300	298	315	319	293
29. Ambala	— 1·4	— 15·4	— 5·5	+ 4·0	— 18·0	362	367	434	459	442
30. *Kalsia State*	+ 2·6	— 16·8	— 2·1	+ 1·4	— 15·3	305	297	357	366	361
31. Hoshiarpur	+ 1·0	— 7·2	— 2·1	+ 12·2	+ 2·9	413	409	440	450	401
32. Gurdaspur	+ 1·8	— 11·0	— ·4	+ 14·6	+ 3·5	451	443	498	500	436
33. Sialkot	+ ·7	— 6·6	— 3·0	+ 9·1	— ·3	522	518	555	572	524
34. Gujrat	+ 4·6	— ·5	— 1·8	+ 10·9	+ 13·3	322	307	309	315	284
35. Jhelum	— 6·7	+ 2·0	— 2·4	+ 4·0	— 3·5	172	184	181	185	178
36. Rawalpindi	+ 3·9	— 1·9	+ 4·7	+ 13·3	+ 20·8	281	271	276	264	233
37. Attock	— 1·4	+ 11·8	+ 3·6	+ ·9	+ 15·3	124	126	113	109	108
IV. North-West Dry Area—	+ 9·4	+ 17·9	+ 22·4	+ 13·2	+ 78·9	108	99	84	69	61
38. Montgomery	+ 42·3	+ 12·2	+ 3·1	+ 19·6	+ 97·0	154	108	97	94	78
39. Shahpur	+ 11·6	+ 32·1	+ 2·0	+ 24·7	+ 87·6	161	144	109	107	86
40. Mianwali	+ 4·9	+ 13·0	+ 5·2	+ 9·4	+ 36·6	66	63	56	53	49
41. Lyallpur	+ 15·5	+ 43·9	+ 1,854·5	— 25·7	+ 2,313·7	301	261	181	9	12
42. Jhang	+ 8·7	+ 23·1	+ 5·9	+ 3·0	+ 46·0	165	152	123	117	113
43. Multan	+ 9·3	+ 14·7	+ 11·8	+ 14·2	+ 60·1	150	137	120	107	91
44. *Bahawalpur State*	+ ·1	+ 8·3	+ 10·9	+ 13·3	+ 36·2	52	52	48	43	38
45. Muzaffargarh	— ·2	+ 7·9	+ 6·8	+ 11·9	+ 28·8	94	94	87	82	73
46. Dera Ghazi Khan	— 6·2	+ 6·6	+ 14·2	+ 12·5	+ 28·4	63	67	63	55	49
DELHI	+ 18·1	+ 2·0	+ 8·8	+ 6·4	+ 39·3	823	697	684	629	591
I. Indo-Gangetic Plain West—	+ 18·1	+ 2·0	+ 8·8	+ 6·4	+ 39·3	823	697	684	629	591
1. Delhi	+ 18·1	+ 2·0	+ 8·8	+ 6·4	+ 39·3	823	697	684	629	591

SUBSIDIARY TABLE IV.

Variation in natural population.

Serial No.	District or State and Natural Division.	Population in 1921. Actual population.	Immigrants.	Emigrants.	Natural population.	Population in 1911. Actual population.	Immigrants.	Emigrants.	Natural population.	Variation per cent. 1911, 1921 in natural population. Increase (+) Decrease (—).	Total excess of immigrants over emigrants during the decade, assuming a death-rate of 20 per mille amongst them.
	1	2	3	4	5	6	7	8	9	10	11
	PUNJAB AND DELHI	**25,589,248**	**712,932**	**518,609**	**25,394,925**	**24,187,750**	**660,219**	**516,612**	**24,044,143**	**+ 5·6**	**83,264**
	PUNJAB ..	**25,101,060**	**627,187**	**549,386**	**25,023,309**	..	..	..	..	..	..
	Indo-Gangetic Plain West (Total)—	**11,934,904**	**946,059**	**743,911**	**11,732,756**	**11,027,490**	**810,967**	**772,699**	**10,989,222**	**+ 6·8**	**190,593**
	Indo-Gangetic Plain West (Punjab)—	**11,446,716**	**847,724**	**762,148**	**11,361,140**	..	..	..	..	..	..
1	Hissar ..	816,810	100,667	139,878	856,021	804,889	136,396	116,814	785,307	+ 9·0	— 60,974
2	*Loharu State* ..	20,621	1,561	4,802	23,862	18,597	5,585	6,000	19,012	+ 25·5	— 3,232
3	Rohtak ..	772,272	94,970	93,131	770,433	..	..	..	..	..	..
4	*Dujana State* ..	25,833	6,801	5,094	24,126	25,485	6,656	5,618	24,447	— 1·3	974
5	Gurgaon ..	682,003	98,313	102,982	686,672	..	..	..	..	..	..
6	*Pataudi State* ..	18,097	5,734	2,846	15,209	19,543	6,699	3,209	16,059	— 5·3	107
7	Karnal ..	828,726	98,551	84,984	815,159	799,787	106,847	88,306	781,246	+ 4·3	— 1,406
8	Jullundur ..	822,544	89,717	209,839	942,666	801,920	86,683	175,808	891,045	+ 5·8	— 54,247
9	*Kapurthala State* ..	284,275	48,571	42,533	278,237	268,133	48,698	45,050	264,485	+ 5·2	3,466
10	Ludhiana ..	567,622	92,642	111,923	586,903	517,192	84,313	124,563	557,442	+ 5·3	14,354
11	*Malerkotla State* ..	80,322	14,698	16,466	82,090	71,144	19,181	18,497	70,460	+ 16·5	— 2,572
12	Ferozepore ..	1,098,248	204,998	135,560	1,028,810	959,657	196,974	131,196	893,879	+ 15·1	18,684
13	*Faridkot State* ..	150,661	42,492	25,455	133,624	130,294	37,748	25,630	118,176	+ 13·1	8,158
14	*Patiala State* ..	1,499,739	233,917	224,375	1,490,197	1,407,659	246,081	240,021	1,401,599	+ 6·3	5,216
15	*Jind State* ..	308,183	75,794	58,000	290,389	271,728	72,195	63,926	263,459	+ 10·2	12,421
16	*Nabha State* ..	263,334	63,554	61,356	261,136	248,887	63,502	68,982	254,367	+ 2·7	7,313
17	Lahore ..	1,131,336	236,357	146,069	1,041,048	1,036,158	218,379	123,770	941,549	+ 10·6	16,223
18	Amritsar ..	929,374	105,814	221,531	1,045,091	880,728	101,831	226,605	1,005,502	+ 3·9	— 17,664
19	Gujranwala ..	623,581	80,644	114,040	656,977	..	..	..	..	..	..
20	Sheikhupura ..	523,135	208,341	17,696	332,490	..	..	..	..	..	..
	Himalayan— ..	**1,737,801**	**62,696**	**62,124**	**1,737,229**	**1,724,480**	**66,285**	**62,314**	**1,720,509**	**+ 1·0**	**— 2,894**
21	*Nahan State* ..	140,448	14,550	4,339	130,237	138,520	15,257	4,675	127,938	+ 1·8	1,939
22	Simla ..	45,327	13,911	12,758	44,174	39,320	18,680	13,588	34,228	+ 29·1	— 3,245
23	*Simla Hill States* ..	306,718	19,196	12,180	299,702	311,236	13,594	11,093	304,735	— 1·7	5,572
24	*Bilaspur State* ..	98,000	9,979	6,347	94,368	93,107	7,468	4,853	90,492	+ 4·3	1,711
25	Kangra ..	766,065	34,420	53,299	784,944	770,386	41,465	47,118	776,039	+ 1·1	— 15,952
26	*Mandi State* ..	185,048	9,565	7,726	183,209	181,110	3,134	8,410	186,386	— 1·7	6,733
27	*Suket State* ..	54,328	1,592	2,126	54,862	54,928	2,925	1,444	53,447	+ 2·6	— 1,910
28	*Chamba State* ..	141,867	5,184	9,050	145,733	135,873	4,271	11,229	142,831	+ 2·0	1,889
	Sub-Himalayan— ..	**5,838,869**	**361,564**	**833,575**	**6,310,880**	**5,805,081**	**361,945**	**816,387**	**6,259,523**	**+ ·8**	**— 120,508**
29	Ambala ..	681,477	99,914	127,449	709,012	689,970	115,354	129,688	704,304	+ ·7	— 17,853
30	*Kalsia State* ..	57,371	18,790	8,460	47,041	55,909	16,980	10,932	49,861	— 5·7	6,102
31	Hoshiarpur ..	927,419	62,081	182,123	1,047,461	918,569	61,742	166,941	1,023,768	+ 2·3	— 39,870
32	Gurdaspur ..	852,192	77,576	159,886	934,502	836,771	75,325	155,119	916,565	+ 2·0	— 20,528
33	Sialkot ..	937,823	68,251	252,489	1,122,061	979,553	78,169	247,977	1,149,361	— 2·4	— 53,768
34	Gujrat ..	824,046	56,286	101,541	869,301	745,634	31,957	112,445	826,122	+ 5·2	21,262
35	Jhelum ..	477,068	25,862	73,974	525,180	511,575	37,908	62,955	536,622	— 2·1	— 31,194
36	Rawalpindi ..	569,224	82,898	44,845	531,171	547,827	70,296	47,446	524,977	+ 1·2	21,970
37	Attock ..	512,249	16,830	29,732	525,151	519,273	19,446	28,116	527,943	— ·5	— 6,629
	North-West Dry Area—	**6,077,674**	**704,146**	**143,534**	**5,517,062**	**5,630,699**	**730,555**	**99,125**	**4,999,269**	**+ 10·4**	**61,631**
38	Montgomery ..	713,786	155,803	105,681	663,664	535,299	58,203	106,119	583,215	+ 13·8	98,283
39	Shahpur ..	719,918	83,310	37,763	674,371	687,366	145,325	35,458	577,499	+ 16·8	— 47,052
40	Mianwali ..	358,205	14,818	23,312	366,699	341,377	13,662	24,704	352,419	+ 4·1	377
41	Lyallpur ..	979,463	474,489	54,587	559,561	857,711	566,320	19,310	310,701	+ 80·1	— 19,673
42	Jhang ..	570,559	21,318	77,667	626,908	515,526	23,773	82,376	574,129	+ 9·2	— 10,518
43	Multan ..	890,264	102,236	41,764	829,792	814,871	86,089	39,204	767,986	+ 8·0	25,516
44	*Bahawalpur State* ..	781,191	84,010	25,444	722,625	780,641	73,151	30,531	738,021	— 2·1	27,189
45	Muzaffargarh ..	568,478	20,613	21,347	569,212	569,461	27,698	23,130	564,893	+ ·8	— 4,876
46	Dera Ghazi Khan ..	495,810	13,115	21,535	504,230	528,447	16,897	18,856	530,406	— 4·9	— 7,014
	DELHI ..	**488,188**	**185,770**	**69,198**	**371,616**	..	..	..	..	..	..
	Indo-Gangetic Plain West.	**488,188**	**185,770**	**69,198**	**371,616**	..	..	..	..	..	..
	Delhi ..	488,188	185,770	69,198	371,616	..	..	..	..	..	..

Note.—Owing to changes in boundaries the figures for 1911 and 1921 cannot be compared in the cases of Rohtak, Gurgaon, Gujranwala, Sheikhupura and Delhi.

SUBSIDIARY TABLE V.

Comparison with vital statistics (For British Territory only).

District and Natural Division.	*In* 1911-1920 *total number of* — Births.	Deaths.	*Number per cent. of population of* 1911. — Births.	Deaths.	*Excess* (+) *or deficiency* (—) *of births over deaths.*	*Increase* (+) *or decrease* (—) *of population of* 1921 *compared with* 1911. — Natural.	Actual.
1	2	3	4	5	6	7	8
PUNJAB AND DELHI ..	8,706,574	7,284,870	43·6	36·4	+1,422,204	1,206,152	+ 1,183,021
PUNJAB	8,511,153	7,101,805	43·5	36·3	+ 1,409,348	..	+ 1,108,280
Indo-Gangetic Plain West (Total)	4,032,958	3,424,762	46·5	39·5	+ 608,196	+ 576,728	+ 617,364
Indo-Gangetic Plain West (Punjab.)	3,837,537	3,242,197	46·5	39·3	+ 595,340	..	+ 542,623
1. Hissar	377,232	294,117	46·9	36·5	+ 83,115	+ 70,714	+ 11,921
2. Rohtak	356,501	299,708	49·9	41·9	+ 56,793	..	+ 57,438
3. Gurgaon	336,510	358,538	46·1	49·1	— 22,028	a ..	— 47,824
4. Karnal	388,117	353,466	48·5	44·1	+ 34,651	+ 33,913	+ 27,713
5. Jullundur	353,093	281,483	44·0	35·1	+ 71,610	+ 51,621	+ 20,624
6. Ludhiana	247,486	203,639	47·9	39·4	+ 43,847	+ 29,461	+ 50,430
7. Ferozepore	457,256	337,782	47·6	35·2	+ 119,474	+ 134,931	+ 138,591
8. Lahore	485,359	379,243	48·5	37·9	+ 106,116	+ 99,409	+ 130,481
9. Amritsar	*431,570*	*363,498*	*49·0*	*41·3*	*+ 68,072*	*+ 39,580*	*+ 48,578*
10. Gujranwala .. .. 11. Sheikhupura ..	404,413	370,723	38·8	35·6	+ 33,690	..	+ 104,671
Himalayan—	289,126	268,922	35·7	33·2	+ 20,204	+ 18,851	+ 2,570
12. Simla	8,286	11,066	21·6	28·8	— 2,780	+ 9,946	+ 6,891
13. Kangra	280,840	257,856	36·5	33·5	+ 22,984	+ 8,905	— 4,321
Sub-Himalayan—	2,397,803	2,072,394	41·7	36·1	+ 325,409	+ 54,177	+ 37,449
14. Ambala	283,896	273,820	41·1	39·6	+ 10,076	+ 4,708	— 9,377
15. Hoshiarpur	378,297	316,059	41·2	34·4	+ 62,238	+ 23,693	+ 8,850
16. Gurdaspur	388,490	324,812	46·4	38·8	+ 63,678	+ 17,937	+ 15,421
17. Sialkot	449,019	359,708	48·2	36·6	+ 89,311	— 27,300	+ 6,642
18. Gujrat	315,520	267,052	40·0	33·9	+ 48,468	+ 43,179	+ 36,047
19. Jhelum	182,993	170,358	35·8	33·3	+ 12,635	— 11,442	— 34,507
20. Rawalpindi	202,907	191,626	37·0	35·0	+ 11,281	+ 6,191	+ 21,397
21. Attock ..	196,681	168,959	37·9	32·5	+ 27,722	— 2,792	— 7,024
North-West Dry Area— ..	1,986,687	1,518,292	41·9	32·0	+ 468,395	+ 535,018	+ 525,638
22. Montgomery ..	220,082	166,909	45·7	33·3	+ 62,173	+ 80,449	+ 212,270
23. Shahpur	268,459	214,742	41·6	33·3	+ 53,717	+ 96,872	+ 74,917
24. Mianwali	143,568	115,762	42·0	34·0	+ 27,806	+ 14,280	+ 16,828
25. Lyallpur	435,144	258,860	51·3	30·5	+ 176,284	+ 248,860	+ 131,601
26. Jhang	231,722	162,445	44·2	31·0	+ 69,277	+ 52,779	+ 45,756
27. Multan	330,897	265,634	40·6	32·6	+ 65,263	+ 61,806	+ 76,051
28. Muzaffargarh ..	*205,505*	187,897	36·1	33·0	+ 17,608	+ 4,319	— 983
29. Dera Ghazi Khan ..	142,310	146,043	28·5	29·2	— 3,733	— 24,347	— 30,808
DELHI	195,421	182,565	47·3	44·2	+ 12,856	..	+ 74,741
Indo-Gangetic Plain West ..	195,421	182,565	47·3	44·2	+ 12,856	..	+ 74,741
Delhi	195,421	182,565	47·3	44·2	+ 12,856	..	+ 74,741

(1). Vital statistics for 1911 referred to the old district of Delhi and none are available for Delhi for 1912; the figures for 1911 have been adjusted over Delhi, Gurgaon and Rohtak; the average for the years 1913 to 1920 has been taken for the year 1912 in Delhi.
(2). Figures for the actual population of 1911 (columns 4, 5 and 8) are those given in Imperial Table II of 1921.
(3). No vital statistics being available for the trans-frontier tract of Dera Ghazi Khan, its population has been omitted in calculating columns 7 and 8.
(4). Emigrants both of 1911 and 1921, born in unspecified parts of the Punjab have all been included when calculating the first entry in column 7.
(5). Further details will be found in Subsidiary Table V of Chapter VI; births and deaths registered in cantonments are not included in that Table as they are not recorded by sex.
(6). This table includes 38,078 births and 40,650 deaths registered in cantonments.

SUBSIDIARY TABLE VI.

Variation by Tahsils classified according to density.

(*a*). ACTUAL VARIATION (BRITISH TERRITORY ONLY).

Natural Division.	Decade.	Variation in tahsils with a population per square mile at the commencement of decade of						
		Under 150.	150—299 (inclusive).	300—449 (inclusive).	450—599 (inclusive).	600—749 (inclusive).	750—899 (inclusive).	1,050 and over.
1	2	3	4	5	6	7	8	9
PUNJAB ..	1881-1891 ..	− 144,582	− 497,244	+ 883,288	+ 575,609	+ 285,842	+ 663,544	− 33,098
	1891-1901 ..	− 112,325	+1,276,262	+ 101,621	− 255,786	+ 246,485	+ 89,096	..
	1901-1911 ..	− 835,475	+2,135,950	+ 477,390	− 918,830	− 853,634	− 369,055	..
	1911-1921 ..	+ 106,844	+ 400,648	+ 439,972	+ 2,219	− 384,301	+ 541,069	..
Indo-Gangetic Plain West.	1881-1891 .	− 86,265	+ 47,634	+ 123,098	+ 237,927	+ 196,810	+ 327,617	..
	1891-1901 ..	− 392,642	+ 247,660	+ 635,628	− 232,629	+ 143,963	+ 395,353	..
	1901-1911 ..	− 164,010	+1,090,534	− 447,364	− 604,040	− 341,264	− 369,055	..
	1911-1921 ..	− 9,424	− 251,768	+ 657,206	+ 31,824	− 426,284	+ 541,069	..
Himalayan ..	1881-1891 ..	− 44,351	− 200,100	+ 288,217	..	− 9,847	+ 33,061	− 33,098
	1891-1901 ..	+ 54,955	+ 237,456	− 288,217	..	..	− 3,391	..
	1901-1911 ..	+ 5,218	− 2,956	+ 162	− 1,193	..	..	..
	1911-1921 ..	− 2,776	− 1,545	− 519	− 27,593	+ 35,003	..	..
Sub-Himalayan ..	1881-1891 ..	+ 1,802	− 750,709	+ 471,973	+ 337,682	+ 98,879	+ 302,866	..
	1891-1901 ..	+ 6,523	+ 201,794	− 245,790	− 23,157	+ 102,522	− 302,866	..
	1901-1911 ..	+ 44,042	+ 112,163	+ 353,279	− 313,597	− 512,370	..	..
	1911-1921 ..	− 19,145	+ 41,880	+ 9,746	− 2,012	+ 6,980	..	..
North-West Dry Area.	1881-1891 ..	− 15,768	+ 405,931	..	..	..	..	..
	1891-1901 ..	+ 218,839	+ 589,352	..	..	..	..	..
	1901-1911 ..	− 720,725	+ 936,209	+ 571,313	..	..	..	..
	1911-1921 ..	+ 137,189	+ 612,081	− 226,461	..	..	..	..
DELHI ..	1881-1891 ..	..	..	..	..	+ 11,745	..	..
	1891-1901 ..	..	..	..	..	+ 75,862	..	..
	1901-1911 ..	..	..	..	..	+ 8,038	..	..
	1911-1921 ..	..	..	..	..	− 413,447	+ 448,188	..
Indo-Gangetic Plain West.	1881-1891 ..	..	..	..	..	+ 11,745	..	..
	1891-1901 ..	..	..	..	..	+ 75,862	..	..
	1901-1911 ..	..	..	..	..	+ 8,038	..	..
	1911-1921 ..	..	..	..	..	− 413,447	+ 488,188	..

Note.—Figures for 1911 and 1921 are based on those given in Provincial Table I, 1921 : adjusted figures have been used for 1901. Adjustment of the figures of 1891 and 1881 (as given in the reports of those years) being impossible, they have been taken without change.

(*b*). PERCENTAGES OF VARIATION (BRITISH TERRITORY ONLY).

Natural Division.	Decade.	Variation per cent. in tehsils with a population per square mile at the commencement of decade of						
		Under 150.	150—299 (inclusive).	300—449 (inclusive).	450—599 (inclusive).	600—749 (inclusive).	700—899 (inclusive).	1,050 and over.
1	2	3	4	5	6	7	8	9
PUNJAB ..	1881-1891 ..	− 3·9	− 10·9	+ 23·5	+ 17·0	+ 20·7	+ 154·2	− 100·0
	1891-1901 ..	− 3·2	+ 31·3	+ 2·2	− 6·5	+ 14·8	+ 8·1	..
	1901-1911 ..	− 23·9	+ 40·1	+ 9·9	− 25·0	− 46·1	− 46·5	..
	1911-1921 ..	− 4·0	+ 5·4	+ 8·3	+ ·1	− 38·5	+ 127·2	..
Indo-Gangetic Plain West.	1881-1891 ..	− 9·1	+ 2·8	+ 5·0	+ 17·1	+ 26·4	+ 76·1	..
	1891-1901 ..	− 45·3	+ 14·0	+ 25·6	− 14·3	+ 15·3	+ 52·2	..
	1901-1911 ..	− 46·2	+ 49·5	− 13·6	− 43·2	− 32·3	− 46·5	..
	1911-1921 ..	− 4·9	− 7·6	+ 23·2	− 4·0	− 59·5	+ 127·2	..
Himalayan ..	1881-1891 ..	− 40·7	− 32·2	*	..	− 100·0	*	− 100·0
	1891-1901 ..	+ 85·0	+ 56·3	− 100·0	..	..	− 10·3	..
	1901-1911 ..	+ 4·4	− ·5	+ 1·5	− 4·1	..	..	..
	1911-1921 ..	− 2·2	− ·2	− 4·8	− 100·0	+ 100·0	..	..
Sub-Himalayan ..	1881-1891 ..	+ ·6	− 44·3	+ 36·4	+ 17·0	+ 15·9	*	..
	1891-1901 ..	+ 2·1	+ 21·3	− 13·9	− 1·0	+ 14·2	− 100·0	..
	1901-1911 ..	− 14·0	+ 9·4	+ 23·2	− 14·1	− 64·4	..	..
	1911-1921 ..	− 5·3	+ 3·2	+ ·5	− ·1	+ 2·5	..	..
North-West Dry Area	1881-1891 ..	− ·7	+ 76·1	..	..	..	..	..
	1891-1901 ..	+ 9·5	+ 62·7	..	..	..	..	..
	1901-1911 ..	− 26·6	+ 73·1	+ 100·0	..	..	..	..
	1911-1921 ..	+ 6·9	+ 27·6	− 39·6	..	..	..	..
DELHI ..	1881-1891 ..	..	..	..	..	+ 3·7	..	..
	1891-1901 ..	..	..	..	..	+ 23·0	..	..
	1901-1911 ..	..	..	..	..	+ 1·9	..	..
	1911-1921 ..	..	..	..	..	− 100·0	+ 100·0	..
Indo-Gangetic Plain West.	1881-1891 ..	..	..	..	..	+ 3·7	..	..
	1891-1901 ..	..	..	..	..	+ 23·0	..	..
	1901-1911 ..	..	..	..	..	+ 1·9	..	..
	1911-1921 .	..	..	..	..	− 100·0	+ 100·0	..

*Note.—No entries in the previous decade of the two compared.

SUBSIDIARY TABLE VII.

Persons per house and houses per square mile.

NATURAL DIVISION.	*Average number of persons per house.*					*Average number of houses per square mile.*				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11
Punjab and Delhi	4·5	4·5	6·2	6·6	6·8	41·1	39·6	29·7	27·2	25·1
Punjab	4·5	..	..	..	..	40·4	..	..	..	..
Indo-Gangetic Plain West (Total) ..	4·5	4·4	6·7	7·1	6·8	65·7	64·4	47·1	41·8	40·0
Indo-Gangetic Plain West (Punjab) ..	4·6	..	..	..	..	63·8	..	..	..	..
Himalayan	4·5	4·6	5·0	5·4	6·3	17·5	17·1	15·4	14·7	12·2
Sub-Himalayan	4·3	4·3	6·1	6·7	7·5	70·1	71·2	53·1	48·0	40·9
North-West Dry Area	4·8	4·7	5·9	5·7	5·9	22·7	21·0	15·3	12·6	11·6
Delhi	4·3	..	..	..	..	193·4	..	..	..	..
Indo-Gangetic Plain West ..	4·3	..	..	..	..	193·4	..	..	..	..

CHAPTER II.

Cities, Towns, and Villages.

49. The definition of village, town and city. 50. Number of towns and cities and population. 51. Accuracy of the census figures. 52. Comparison of the urban and rural population. 53. General movement of the population. 54. Rural population. 55. Distribution of population in villages and towns. 56. Area of villages. 57. Number of persons per occupied house in villages. 58. Inter-relationship of population per village, of area per village, and of persons per occupied house. 59. Boundary and village site positional efficiency. 60. Number of persons per building in selected towns and cities. 61. Number of inhabitants per room 62. Reference to the statistical tables.

The definition of village, town and city.

49. The definition of "village" used in the census instructions was identical with that of an estate under section III-1 of the Punjab Land Revenue Act. Though this definition is based on the technique of the Punjab Land Revenue system, and is therefore suitable for use amongst a staff largely drawn from revenue officials, it will be desirable to explain its meaning to those unfamiliar with Punjab conditions. The definition is as follows :—

"'Estate' means any area (*a*) for which a separate record of rights has been made; or (*b*) which has been separately assessed to land revenue or would have been assessed if the land revenue had not been released, compounded for, or redeemed; or (*c*) which the Local Government may, by general rule or special order, declare to be an estate."

It should be noticed that the definition applies to a demarcated area of land and not to a group of residential sites.

While, therefore, every distinct village will have a distinct area of land comprised in a single closed boundary, it not infrequently happens that a revenue "village" contains no residential site, the owners and cultivators residing in buildings on the residential site of another "village." In such cases the persons concerned are enumerated in the latter village and not in the former. As a general rule in the plains there is one residential site to each village with, here and there, a hamlet or a few temporarily occupied cottages built at a distance from the main village site for the protection of the outlying fields, or for the herding of cattle adjacent to a grazing ground. In the Western Punjab, in tracts into which canal irrigation has not yet penetrated, the well is generally the nucleus of a few residential houses belonging to a single owner and his family, and this well is separated by a considerable distance from similar wells and groups of buildings. In the hills, again, the presence of large residential sites is exceptional, and the houses of the landowners lie scattered over the face of the countryside. Throughout the Himalayan tract the accepted definition of a village renders it misleading as a basis of residential statistics. For example, in the 1868 census report the Kangra district was shown as including 7 towns with a population of over 5,000 persons whereas, as a matter of fact, not a single town existed. Each of these 7 places with over 5,000 inhabitants was an enormous tract of waste land interspersed with cultivation, and its inhabitants lived in small hamlets scattered about over its surface.

For all practical purposes a village in the plains may be thought of as a cluster of houses inhabited by people owning and cultivating the surrounding land; but the actual unit is included within the boundary of the land, whether cultivated, culturable or unculturable, and not merely within the limits of the residential buildings.

To a very large extent Punjab villages are self-supporting and independent, but, in the case of smaller villages it not infrequently happens that the agriculturist buys his seed, markets his produce and finances his more serious items of expenditure, such as those incurred at weddings or burials by recourse to a neighbouring and a larger village. The larger the village the greater is the probability of finding in it a more efficient doctor, carpenter, ironsmith, or pottery-maker, and with an increased demand for more skilled devices and for better appliances, the more will recourse to distant large villages from the smaller villages be encouraged. This tendency will hasten the transformation of a large village into a larger one and from a larger village into a town. In the Punjab the slowness with which towns have been formed indicates how little the rural population has had to learn hitherto from the urban population.

For census purposes a town has been defined as including—
(1) every municipality,
(2) all civil lines not included within municipal limits,
(3) every cantonment,
(4) every continuous collection of houses inhabited by no less than 5,000 persons which the Provincial Superintendent may decide to treat as a town for census purposes,
(5) the capital of every State except the Minor Simla Hill States.

It is clear that this definition aims at a rapid dichotomy (certainly one of the features of a good definition), rather than at a scientific discrimination between towns and villages. A better criterion could probably be based, in the Punjab, on the relative proportion of persons engaged in agriculture to the total population or, on the percentage of persons born in the town or village resident in that town or village. The possibility of applying these tests will be glanced at later.

The census definition of town is the same as that adopted at the 1911 census, except for the addition of category 5.

Of the places which have been treated as towns in the present census 51 are places with less than 5,000 inhabitants. Of these 51 places 28 have necessarily been included by virtue of the first three clauses of the definition, whilst four come in under the fifth clause. The remaining 19 are included either, because at the time of selection their population was estimated at over 5,000, or on account of special reasons, the chief of these being the presence of a bazaar.

The net result is that there are 187 towns included in the Punjab and Delhi at the present census. The figures in the margin show the number of places classed as towns or cities during the last 5 censuses. The figures prior to 1911 are swollen by the inclusion of all places of 5,000 inhabitants and over in the list of towns, and no deduction as to a change in economic conditions should be made from the crude numbers quoted. Allowance for the varying classification will be made at a later stage.

Census.	Number of towns and villages.
1921	187
1911	174
1901	228
1891	221
1881	280

Number of towns and cities and population.

50. As noted above, the places now treated as towns and cities in the Punjab are 187 in number, and have an aggregate population of 2,901,098 persons as against the 174 towns and cities with 2,567,282 inhabitants in 1911. The places which have been treated differently at the last two censuses are noted in the margin, and it would be wrong therefore, to speak of the change in the urban population as a rise from 2,567,282 to 2,901,098 without consideration of the effect of the altered classification.

Places treated as towns in 1921 and not in 1911.

Town.	District.	Population.
Moga ..	Ferozepore ..	14,145
Baghbanpura ..	Lahore ..	10,251
Hafizabad ..	Gujranwala ..	8,854
Meham ..	Rohtak ..	7,820
Khanewal ..	Multan ..	5,647
Bhown ..	Jhelum ..	5,572
Sultanwind ..	Amritsar ..	5,572
Shorkot ..	Jhang ..	5,317
Safidon ..	Jind ..	5,199
Nurpur ..	Shahpur ..	5,117
Toba Tek Singh ..	Lyallpur ..	5,041
Shahdara ..	Sheikhupura ..	4,998
Jhawarian ..	Shahpur ..	4,559
Mitha Tiwana ..	Shahpur ..	4,158
Dujana ..	Dujana ..	4,127
Bhalwal ..	Shahpur ..	4,082
Ahmadpur ..	Jhang ..	4,045
Ichhra ..	Lahore ..	3,584
Sheikhupura ..	Sheikhupura ..	3,487
Pataudi ..	Pataudi ..	3,342
Suket ..	Suket ..	2,534
Sillanwali ..	Shahpur ..	2,205
Phulerwan ..	Shahpur ..	1,926
Amloh ..	Nahan ..	1,543
Total 24		123,145

A truer basis of comparison for the changes in the urban population of the Punjab will be set out in para. 3 below.

The omission of Shahpur from the list of towns in 1921 needs special justification. At one time it was the Headquarters of the district, but these have been transferred to the more easily accessible and rapidly growing town of Sargodha. In 1911 3,131 inhabitants of the inhabitants of Shahpur lived in the civil lines, whilst the population of the town proper is only 5,608, and has been declining rapidly during the last 10 years.

The other omissions need no special remark. They are all of places which

Places treated as towns in 1911 but not in 1921.

Town.	District.	Population.
Shahpur ..	Shahpur ..	8,739
Garhshankar ..	Hoshiarpur ..	4,923
Miani ..	Hoshiarpur ..	4,870
Chawinda ..	Sialkot ..	4,695
Kalanaur ..	Gurdaspur ..	4,606
Anandpur ..	Hoshiarpur ..	4,041
Akalgarh ..	Gujranwala ..	3,943
Dasuya ..	Hoshiarpur ..	3,597
Khanna ..	Ludhiana ..	3,319
Farukhnagar ..	Gurgaon ..	3,158
Khudian ..	Lahore ..	2,992
Total 11..		48,883

had a population of less than 5,000 in 1911, and all have been declining rapidly since 1901. The new inclusions comprise 13 towns with a population of less than 5,000, but three of these are the capitals of States, and one the headquarters of a district. All the others are rapidly growing places of markedly urban characteristics, and the majority of them are in the canal colony areas where a town, once successfully established, usually exhibits a mushroom growth.

No formal definition of "city" was adopted for census purposes, but for administrative convenience Government has decided that Delhi, Lahore, Amritsar, and Multan should be classed as cities in this report. Rawalpindi, with a population of over 100,000, which owes a very large part of that population to the existence of Cantonments, and is not an industrial centre, has not been classed as a city. On the other hand, Multan has been ranked as a city although its population is recorded at the census as only 84,806, its normal population being temporarily reduced owing to its partial desertion at the time of the census on account of a severe epidemic of plague.

Accuracy of the Census figures.

51. As it is necessary before making any deductions from the statistical data collected at a census to have a clear idea of the probable accuracy of the enumeration and classification, a few remarks on this subject are here interpolated. So far as the present writer has been able to discover no systematic objective test of the accuracy of the census figures has been applied to them, and each Provincial Superintendent has formed his own subjective estimate, which naturally varies with his belief in his own thoroughness and the degree of reliance that he places in the enumerators and supervising staff. While no doubt each Superintendent is perfectly entitled to have his own opinion on the accuracy of the census work, at the same time this opinion will have only a slight scientific weight unless it is supported by the internal evidence of the figures, or by a corroborative independent test. In this matter of the enumeration of the tahsil, district or provincial population by sexes and religions it is impossible to do more at the present stage than to guess at the amount of error. At the same time I must confess to scepticism as to the high degree of accuracy which has been claimed for the figures by many Census Superintendents. Familiarity with the inaccuracies of the statistical data collected in India from similar sources as those on which the census figures are based, emphasises the need of caution. In the Punjab I have found gross errors in price statistics, in the revenue records, and even in the recorded areas of crops, which are reputed to be as accurate as any in the world, and in the estimates of yield on which the final outturn of the crops is computed. Vital statistics too are known to be very unreliable. *A priori,* therefore, there is good ground for doubting that the census figures possess the extreme accuracy which is claimed for them.

The weight of high authority is against the view taken above, and it is only with extreme diffidence taht I venture to differ from the opinions hitherto expressed on this subject. Thus Sir Denzil Ibbetson in his report on the 1881 census writes—"I believe that the results of the census, so far as regards the actual enumeration of the people by sexes, are wonderfully accurate . . . . .The probability of the concealment of females, the only direction in which any suspicion of material error can arise is discussed on the chapter of sex." Sir Edward Maclagan, present Governor of the Punjab, says on page 28 of the census report of 1891, "there is very little doubt, that, as far as actual enumeration goes, the census of 1881 was carried out with remarkable accuracy, and almost every district officer is of opinion that the present census also was extremely accurate." Sir Edward Maclagan remarks however that "as regards the absolute value of the figures (of births and deaths), I believe them to be utterly unreliable."

Mr. H. A. Rose, in his report on the 1901 census seems to have entertained no doubts as to the absolute accuracy of his figures.

Rai Bahadur Pandit Hari Kishen Kaul on page 197 of Part I of the report of the census of 1911 says, "no statistics compiled at an Indian Census are

probably more removed from the actual facts as those of "age." He then summarises the various causes which led to a preference for grouping children under one age rather than another; but, he does not appear to have doubted the accuracy of his totals independently of the age grouping.

Mr. Middleton in an interesting examination of the errors in the vital statistics of the province based his calculation on the assumption of absolute accuracy in the census totals at the two decades 1911 and 1921. The line of reasoning adopted is open to criticism,* but the point here insisted on is the assumption of complete accuracy in the census figures.

Mr. Thompson in his report on the present 1921 census of Bengal, reaches the conclusion that the Bengal census figures have a high degree of accuracy, and that possibilities of excess enumeration would be likely to counterbalance the probabilities of omissions. He says "it may be considered very unlikely that the census total is out as much as 1 *per mille* and it is probable that it is very much more accurate."

Practically the only dissentient view is expressed in the Actuarial Report of Mr. Acland (Chapter 5, Government of India Census Report, 1911, page 158, volume I, part I) when, after describing the fitting of the provincial age data by a graduation formula, he says "in the case of the Punjab the figures were not found amenable to treatment by this method, and this was one of the many indications that the figures in this province are not complete or reliable;" and, again, on page 166 "I was ultimately driven, reluctantly, to the conclusion that no useful purpose could be served by publishing the mortality table for female lives in the Punjab, and have thus had to follow, in this respect, the course adopted by Mr. Hardy, in his report on the 1901 census."

Mr. Gait in paras. 264—267 of volume I, part I, of the Government of India Census Report of 1911, has dissented very vigorously from Mr. Acland's views.

At this stage I would have preferred myself not to express any opinion, but, as some measure of the inaccuracy of the data has to be implicit in all the arguments that may be advanced as to the spatial or temporal variation of the population, it is necessary to adopt a conventional standard of the probable inaccuracy. As a working hypothesis, therefore, I have assumed that the mean error for the totals by religions and sexes by each territorial division is 1 per cent. This figure has been adopted because, on one hand, most, if not all, Census Superintendents regard the figures as considerably more accurate than this, and, on the other hand, because all the Punjab statistics that I have yet come across in 17 years' experience have average errors in excess rather in defect of this amount; and partly also because as a District Officer in Jullundur the concealment of the existence of female children was a matter of continual report and observation. Lastly, even the most cursory examination of the age distribution figures indicates that there must be an enormous number of omissions of children under the age of 5. In 28 out of 29 districts in British Territory in the Punjab there is an excess of persons in the age group 5—9 over that in the group 0—4 years of age, and this can only be accounted for in five ways—

(1) By an excess of immigrants who in March 1921 would be between the ages of 5 and 9, or an excess of emigrants who would in March 1921 be of the ages of 0—4.

(2) By a great excess in the number of the births in the years 1911—1914 as compared with the birth in the years 1915—1920.

(3) By a differential death-rate adversely affecting the children born in the quinquennium 1915—1920.

(4) By the transfer of children from the 0—4 age group to the 5—9 age group by misstatement or misclassification.

(5) By the actual omission of children below the age of 5.

In the first place it should be noted that the discrepancy in the numbers of the two age groups occurs for male as well as for female children and, therefore, no explanation is valid by reference to mere concealment of female births.

As to the first possibility, it may be said that there is no reason to suppose that Punjab families during 1915—1920 emigrated when the bulk of their children were between the ages of 0—4, as compared with the numbers that emigrated when the children were aged 5—9; nor, on the other hand that families from outside the

*Vide Appendix I for an analysis of the errors arising from incorrect census figures in judging of the accuracy of vital statistics.

province particularly selected that period to emigrate at which their children were between the ages of 5—10. It seems probable indeed that those tribes which are essentially nomadic in their habits such as the Odh, Purbia or Gadaria travel with equal facility whatever the age of their children. The discrepancy between the numbers in the age groups can, therefore, not be explained from this cause.*

As to possibility (2) a complete test can only be applied after allowance for the number of deaths among the children born during the decade 1911—1921. This test was not applicable owing to the fact that deaths are not recorded in the annual Sanitary Reports for each year of age, and all that is now possible to do is to point out that the number of births during the two quinquennia of the decade 1911—1920 (inclusive) were as follows:—

Quinquennia.		*Males.*	*Females.*	*Total.*
1911—1915	..	2,269,989	2,070,721	4,340,710
1916—1920	..	2,175,653	1,956,743	4,132,396

It will thus be seen that there has been an excess in the number of births in the quinquennium 1911—1915 which will however explain † less than 5 per cent. of the excess in the numbers of age group 5—9 over that in the age 0—4 at the census of 1921.

As to possibility (4) namely, the transfer from age group 0—4 to age group 5—9 owing to the misstatement, Pandit Hari Kishen Kaul makes some valuable observations in para. 288 (*a*) of his Punjab Census Report for 1911, but the net result of the various influences leading to misstatement of children's ages would not appear to be any inflation of the age group 5—9. In fact as Pandit Hari Kishen Kaul points out there would be a considerable incentive to exaggerate the ages of male children between the ages of 5 and 10, in order to allow of their employment without infringing the provisions of the Factory Act. Such exaggerations will often be ludicrous in the extreme, the age of a boy of 8 or 9 often being stated at about double that figure. Any depression of a girl's age from over to under 10 years, helping to swell the age group 5—9, will therefore be more than offset by exaggerations in the ages of male children. The discrepancy in the age groups cannot be accounted for on this basis. While, therefore, it is not asserted that the above qualitative analysis is complete, it suggests that some part of the discrepancies in the first two age groups is due to the omission of children between the ages of 0 and 4 years of age. According to the tables by Mr. Acland for the 1911 census the age group 0—4 should contain 317,742 males as against 256,778 females in the age group 5—9. These figures apply of course to a stationary population, but if we use them as approximately valid to the Punjab population figures we find that the age group 0—4 should be 23·7 per cent. in excess of the age group 5—9, and not, as we find, anything up to 14 per cent. in defect.

Evidence as to the unreliability of the census of the number of inhabitants per building carried out in Lahore, Amritsar, Rawalpindi and Jullundur, though, of course, the accuracy to be expected is much less than that of the census proper, is afforded by the statistics themselves. Thus by adding up the number of buildings with the specified number of inhabitants per building, it is found that in the case of wards 1—6 of Lahore City, there must be no less than 117,140 inhabitants as against 92,533 enumerated in the census. The difference of over 24,000 cannot be accounted for except by the inaccuracy of one or the other of the enumerations. In the case of ward 3 of Rawalpindi City the discrepancy is even more marked.‡

Summing up, therefore, an average inaccuracy of one per cent. would appear not to be an unreasonable working figure for the totals by religion and sex. In the absence of proof to the contrary the assumption of greater accuracy would be extremely unwise, and the possibility of even greater errors in particular classifications must be borne in mind in all the succeeding chapters.

Comparison of the Urban and Rural Population.

52. Owing to the differences of definition and the consequent changes in the number of places classed as towns at the various censuses, a perfect comparison of the percentage of the urban population at various epochs is not possible.

* It might be argued, of course, that there might have been a long influx of very young children during 1911—1915 (who would be between 5—9 in 1921) or an efflux of very young children during 1916—1921, or, that large numbers of children between 5—9 had come into the Punjab just before the 1921 Census. William of Occam's razor would cut through most of these assumptions.

† In view of the inaccuracy of the vital statistics one cannot be confident that the births did really fall off in the last half of the decade, when administrative routine was less rigid owing to the war and to internal disturbances.

‡ Other cases in which the figures are open to suspicion will be referred to later on. In the present chapter such an instance is dealt with in paragraph 51.

Census.	Percentage of the urban population of the Punjab excluding Delhi.
1891	10·7
1901	10·6
1911	9·8
1921	10·3

The actual percentage of the urban on the total population, adopting the actual classification of towns used at each of the censuses, is shown in the margin. Roughly speaking therefore, the urban population of the Punjab can be put at 10 per cent. of the whole, and there is no sign of a marked tendency for persons to flock into the towns and cities. Further details will be found in the subsidiary Table XV attached to this chapter, which gives also the figures for Delhi Province, where the urban population is now 62·4 per cent. of the whole.

Another way of looking at the changes in the urban population, which avoids one of the pitfalls of classification, is to consider the changes of population of only those towns which have been classed as towns at all 5 censuses since 1881. This mode of comparison is open of course to the objection that it omits from later censuses those towns which have sprung up in recent years: for example, in the Lower Chenab, Lower Jhelum and Lower Bari Doab Colonies, and also it omits from the earlier censuses those places which were properly classed as towns in 1881 or 1891, but have since ceased to have distinctively urban characteristics. With this warning in mind, reference may now be made to subsidiary Tables VII and VIII, which give the actual population of 157 towns and cities classed as towns and cities at all 5 censuses since 1881 inclusive, and also the changes in population whether positive or negative in each of the 4 inter-censal decades. Table VIII is instructive in this respect as it shows that since 1881 only 24 towns and cities have made uninterrupted progress throughout the last 40 years. These towns are noted in the margin.

Punjab Towns which have risen steadily in population since 1881.

Lahore.	Bathinda.	Jaitu.
Jullundur.	Montgomery.	Pathankot.
Sialkot.	Kot Kapura.	Jampur.
Gujranwala.	Fazilka.	Bhakkar.
Kasur.	Faridkot.	Muzaffargarh.
Jhang Maghiana.	Muktsar.	Karor.
Simla.	Mianwali.	Delhi.
Rohtak.	Leiah.	Campbellpur.

On the other hand 9 towns have been uninterruptedly on the down grade during the last 40 years. These towns are noted in the margin in order of population. Of these steadily decaying towns the Ambala District contributes 2, the Gurdaspur District 3, and Jhelum, Jullundur, Gurgaon and Simla 1 apiece.

Punjab Towns which have steadily diminished in population since 1881.

Pind Dadan Khan.	Dera Baba Nanak.
Sadhaura.	Dinanagar.
Rahon.	Buria.
Sujanpur.	Dagshai.
Faridabad.	

In both marginal lists the towns are shown in descending order of population as found at the 1921 census.

Adopting the same classification, *viz.*, counting the urban population as the number of persons residing in the 158 places classed as towns or cities at each of the last 5 censuses, the percentage of urban on total population is as noted in the margin. These figures are lower than the percentage of the urban population given previously, the reason for this being, of course, that some towns have been excluded in the latter classification, owing to their not having been treated as towns at each of the 5 censuses. Both sets of figures, however, show the same general trend, namely, that of a fall in the urban population in 1901 and 1911, and a subsequent rise in 1921. Those in favour of the industrialisation of the Punjab will deplore, while those who desire the maintenance of agriculture in its premier position may approve of the absence of any marked tendency of the population to congregate in towns.

Census.	Percentage of urban on total population.
1881	9·6
1891	9·5
1901	9·0
1911	9·4
1921	9·6

General movement of the population.

53. In respect of urbanisation the truth of the matter is that, up to the present, the movement of the population of the Punjab has been towards occupying the desert spaces which canal irrigation has rendered fertile, and it is only when this process has been completed and the mother liquor ceases to be in a state of flux that crystalisation in the shape of towns will take place. The general movement of the population has been ably discussed by Mr. Middleton in chapter I; but, as it is relevant to the subject in hand a different presentation

of the data is proposed. For this purpose reference is made to the diagrams Nos. 17, 18, 19 and 20 showing the isopleths of population density for the 4 censuses from 1891—1921, inclusive. These diagrams show very clearly what the movement of the population has been. Thus, before the introduction of canals it is clear that the lines of equal density of population ran roughly parallel to the lines of equal annual rainfall, the most densely occupied area being that lying between 20″ and 35″ of annual rainfall. With the introduction of the colony canals the lines of equal population density, which ran originally very close to each other, have in the recent decades moved towards the south-west. No more than 20 years ago a comparatively small area of land round Multan formed a population oasis. In 1891 the contour line of a 100 persons per square mile, which enclosed the oasis of Multan, was distant no less than 160 miles from the general contour line of density 100. Since 1891 however, owing to the development of the Lower Jhelum, Lower Chenab and Lower Bari Doab Colonies the general 100 density line has advanced towards Multan at an average rate of about 10 miles per annum, and in 1911 Multan had been turned, from the point of view of population, from an island into a narrow-necked peninsula. The whole trend of events, as to which a great deal more might be said. in particular about the shape and changes in the isopleths round Amballa and Delhi, is very clearly brought out in the diagrams.

With the construction of the Sutlej Valley Canal, the Bhakra Dam and the Sindh-Sagar Canal there will be a tendency for the population isopleths to resume their original parallelism with the lines of equal rainfall, the reason for this being that in the Punjab, whether wholly unirrigated or wholly irrigated, the density of population must depend on the differential advantage conferred by the rainfall. So long as the Punjab was, and is, only partially irrigated by perennial canals, the canals and not the rainfall will be the dominating factor in deciding the shape of the density isopleths. It should be noted that while the isopleths of lower population density have moved out rapidly in a south-westerly direction in the last 30 years, the isopleths of higher population density have moved at a less rapid rate. Thus between 1891—1921 the isopleths of 200 persons per square mile have moved in a south-westerly direction from Lahore to an extent of about 70 miles, *viz.*, at a rate of 2·3 miles per annum as compared with the annual rate of movement of 10 miles per annum of the 100 density line, while the 300 density isopleths have only moved during the same interval at a rate of a little over 1 mile per annum. It seems probable that the movements of the isopleths will continue in the same direction for some years to come, with a tendency, as suggested above, to a greater parallelism with the isohyets, provided of course there is no untoward interruption of the Punjab's colony development.

As noted, therefore, the population of the Punjab has, of recent years, been too much in a state of flux towards sparsely populated areas for the formation of towns to have taken place. It may be possible to hazard a guess that when the movement of population becomes very slow, or ceases, the process of formation of towns is likely to be accelerated. At any rate so much may be asserted that the cultivator in the canal colonies is beginning to appreciate the fact that in order to be a successful farmer he must sell his produce successfully, as well as grow it successfully, and he is, therefore, desirous of more and better organised markets close to the areas on which he raises his crop; and though something has been done in the past to provide these facilities, no one would venture to assert that he has at present either adequate markets or adequate means of reaching them. When means of communication have been improved there is likely to be a rapid growth of the numbers and extent of Punjab towns. Want of good roads and railways are undoubtedly the limiting factors in preventing villages turning into towns with more readiness than they have done in the past.

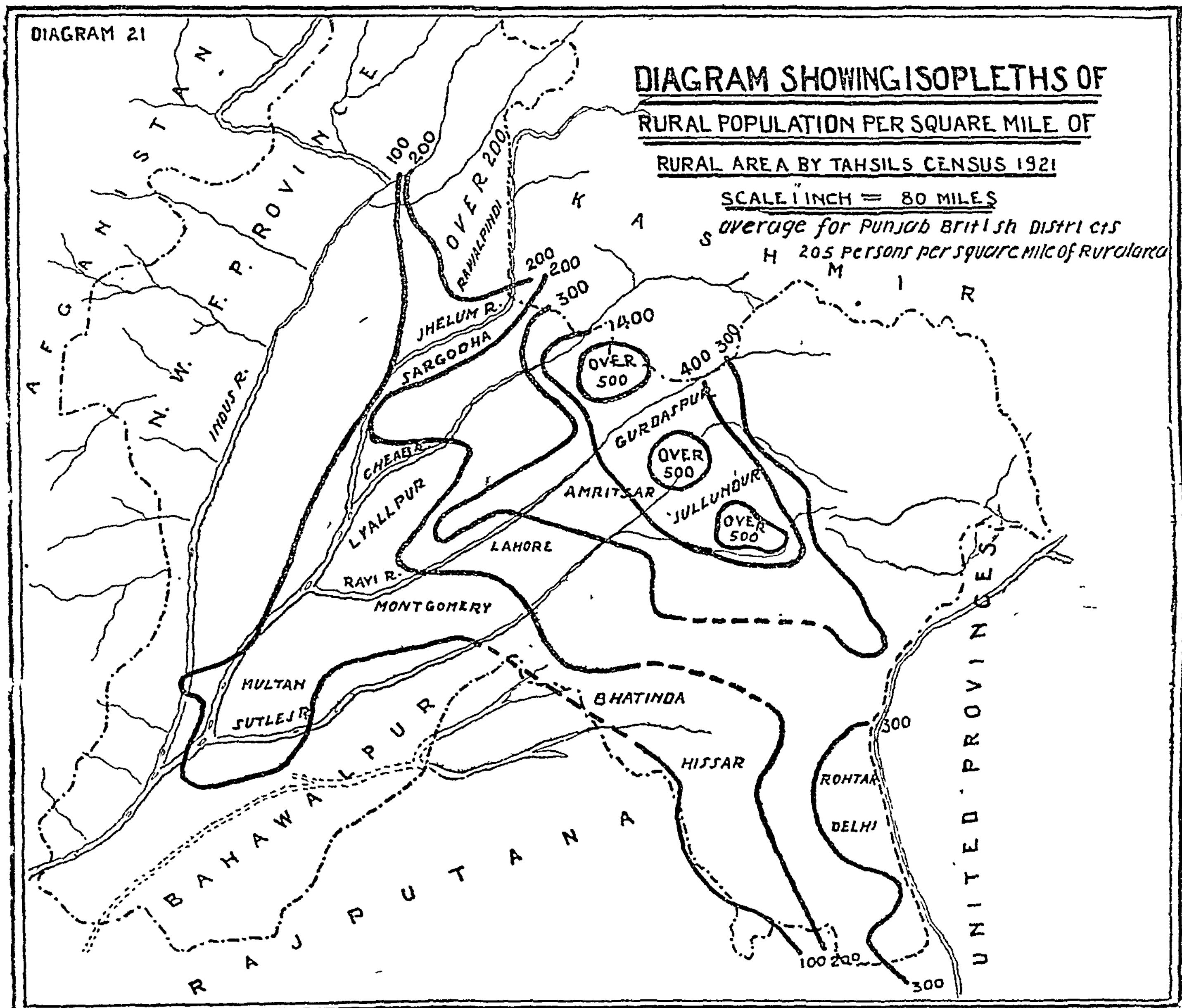
Rural population. 54. The diagrams which have been printed in the foregoing sections give the general population density, *viz.*, the density based on the population in both towns and villages, this course being necessary because the rural density by tahsils, without which detail it would be impossible to draw the isopleth curves, was not available for all the Punjab censuses. Apart from this fact, however, the general population density has a value of its own. For the purposes of discussion of the purely rural population, reference may be made to diagram 21 which shows the rural population density per square mile. The figures required for

drawing this diagram were obtained—

(1) by excluding from each tahsil the population of the towns of that tahsil, and

(2) by excluding from the area of the tahsils the so-called revenue area of the towns situated in that tahsil.

It was by no means easy at this stage to obtain reliable figures of the revenue area attached to towns, as it involved reference to all the districts of the Punjab. Where, however, there was a clear error in the return sent in, a further reference was made to the revenue authority concerned, and the figures finally used may be accepted as approximately correct. The aforesaid revenue area includes a good deal more than the mere sites of the towns concerned and the adjoining waste, and in some cases the arable land included in the revenue area exceeds the area under buildings and roads in the town itself.



Similarity between diagram 21 of the density of rural population with that of diagram 20 of the general population density is evident. The three islands of high density round Jullundur, Amritsar and Sialkot are shown in both diagrams, while, as was to be expected, the border density curve of a 100 persons per square mile is almost identical in both cases. On the other hand, the projections of advancing population in the Lower Jhelum and Lower Chenab Canal Colonies are even more marked than before. It is rather unsafe to argue from lines of equal density based on tahsil figures only, but, as it stands, diagram 21 shows that

the maximum population density gradient lies between Daska and Gujranwala. A diagram of population density based on a smaller division of area, say an assessment circle or a zail, would be considerably more accurate than the diagram now presented; but time forbids its preparation.

Distribution of population in villages and towns.

55. The actual distribution of the population in towns and villages for each group of 500 persons is given in the margin.

Frequency of towns and villages with a population between the limits named. British Territory only.

Population limits.	Frequency.	Population limits.	Frequency.
0—499 ..	21,958	10,500—10,999 ..	3
500—999 ..	7,528	11,000—11,499 ..	5
1,000—1,499 ..	2,577	11,500—11,999 ..	1
1,500—1,999 ..	106	12,000—12,499 ..	3
2,000—2,499 ..	406	12,500—12,999 ..	1
2,500—2,999 ..	244	13,000—13,499 ..	1
3,000—3,499 ..	164	13,500—13,999 ..	0
3,500—3,999 ..	97	14,000—14,499 ..	2
4,000—4,499 ..	57	14,500—14,999 ..	1
4,500—4,999 ..	52	15,000—15,499 ..	2
5,000—5,499 ..	33	15,500—15,999 ..	0
5,500—5,999 ..	24	16,000—16,499 ..	1
6,000—6,499 ..	14	16,500—16,999 ..	0
6,500—6,999 ..	11	17,000—17,499 ..	1
7,000—7,499 ..	9	17,500—17,999 ..	2
7,500—7,999 ..	13	18,000—18,499 ..	1
8,000—8,400 ..	8	18,500—18,999 ..	0
8,500—8,999 ..	5	19,000—19,499 ..	0
9,000—9,400 ..	4	19,500—19,999 ..	0
9,500—9,999 ..	4	Over 20,000 ..	24
10,000—10,499 ..	3		

This distribution could be fitted with a Pearsonian curve of type J,* but is extremely doubtful whether it really represents the facts as it is certain that the frequency of villages with a very small population decreases as the population diminishes, the modal population being probably between about 3 to 5 hundred persons per village.

The mean population per village for British Districts is 546, and for the areal distribution of the various sizes of villages diagram 22 may be referred to. This diagram is a remarkable one because it shows that, with the exception of Multan, the location of villages with a population of 800 persons and over constitutes a well-defined series of knolls, running roughly parallel to the Himalayas, but distinctly further away from them than the area of greatest density of population. This fact is conformable with (but not necessarily explicable by) the South-westerly movement of the population, which has resulted, apparently, in people who are emigrating to a new territory preferring to attach themselves to villages already built rather than to build new ones. The inevitable dependence of the old Punjab on the rainfall is very clearly shown by the line of 500 persons

*The actual values of the constants found for this distribution were, after applying the full correction for abruptness at the beginning of the range and Sheppard's corrections.

$\mu_2 = \cdot 4533$

$\mu_3 = 3\cdot 2821$

$\mu_4 = 31\cdot 9162$

which give $\beta_1 = 115\cdot 58$, $\beta_2 = 155\cdot 31$.

This makes the criterion $\kappa < 0$ and a type I curve is indicated.

DIAGRAM 17

DIAGRAM SHOWING ISOPLETHS OF POPULATION DENSITY PER SQUARE MILE 1891 CENSUS

Scale 1" = 80 Miles.

AFGANISTAN
N. W. F. PROVINCE
KASHMIR
Rawalpindi
Sargodha
Sialkot
Amritsar
Lahore
Jullundur
Lyallpur
Montgomery
Multan
Bhatinda
Simla
Ambala
Hissar
Rohtak
Delhi
INDUS R.
JHELUM R.
CHENAB R.
RAVI R.
BEAS R.
SUTLEJ R.
BAHAWAPUR
RAJPUTANA
UNITED PROVINCES
100 200 300 400 500

DIAGRAM 18

DIAGRAM SHOWING ISOPLETHS OF POPULATION DENSITY PER SQUARE MILE 1901 CENSUS

Scale 1" = 80 Miles

AFGANISTAN
N. W. F. PROVINCE
KASHMIR
Rawalpindi
Sargodha
Sialkot
Amritsar
Lahore
Jullundur
Lyallpur
Montgomery
Multan
Bhatinda
Simla
Ambala
Hissar
Rohtak
Delhi
INDUS R.
JHELUM R.
CHENAB R.
RAVI R.
BEAS R.
SUTLEJ R.
BAHAWAPUR
RAJPUTANA
UNITED PROVINCES
100 200 300 400 500

DIAGRAM 19

DIAGRAM SHOWING ISOPLETHS OF POPULATION DENSITY PER SQUARE MILE 1911 CENSUS

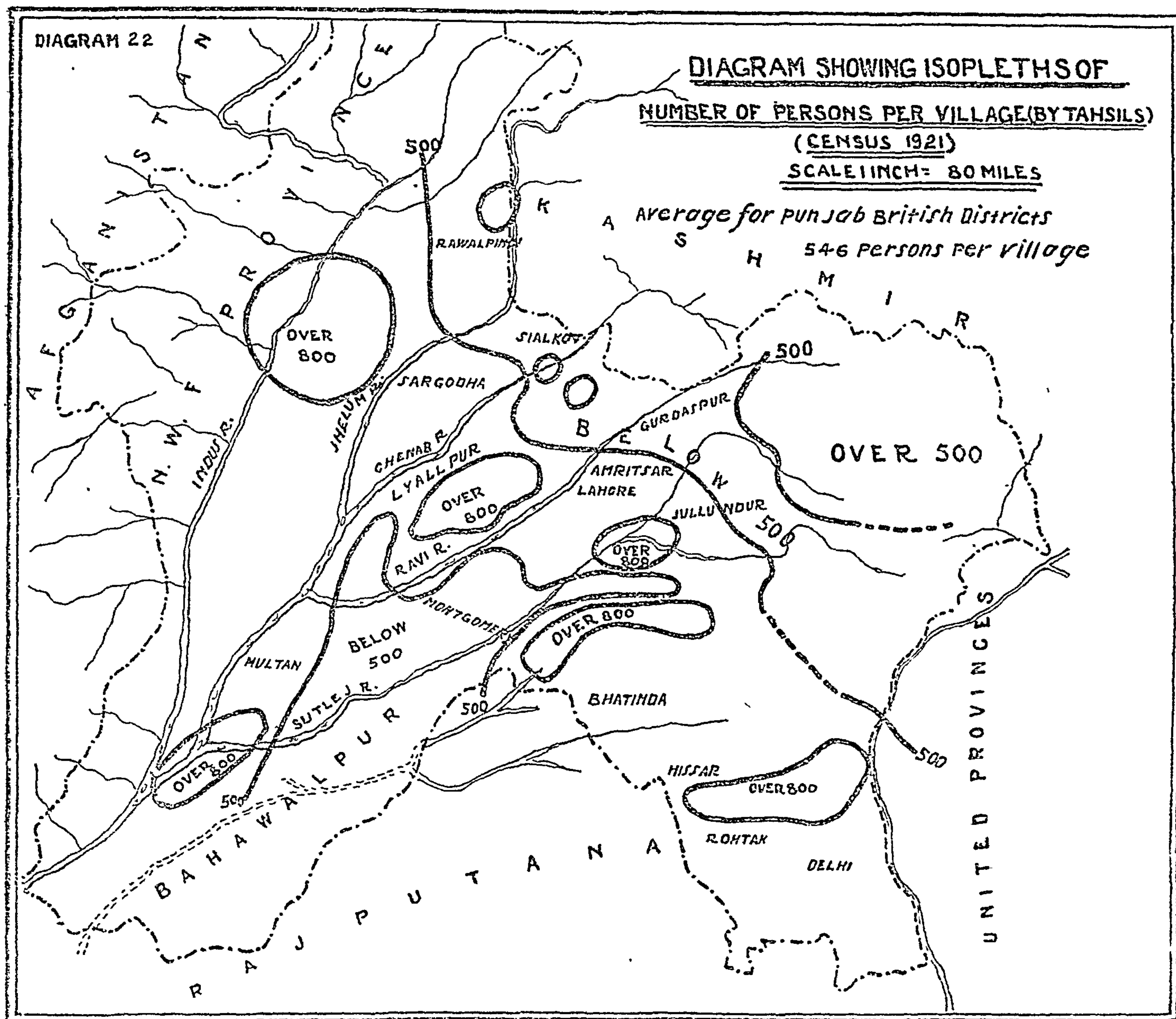
Scale 1" = 80 Miles

DIAGRAM 20

DIAGRAM SHOWING ISOPLETHS OF POPULATION DENSITY PER SQUARE MILE 1921 CENSUS

Scale 1" = 80 Miles

per village, this line being roughly concurrent with the isohyets of 25″ of annual rainfall.

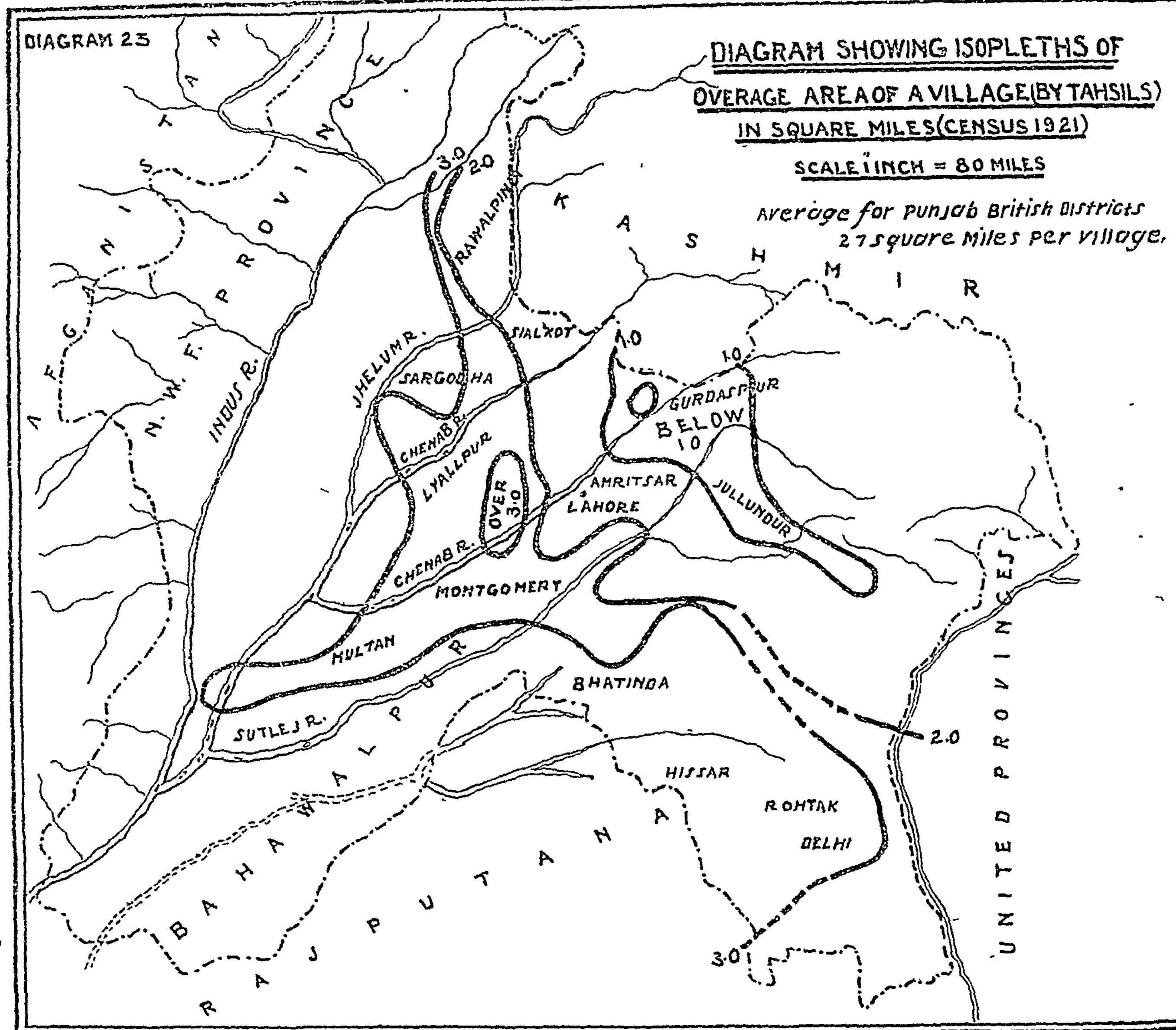


This line demarcates the submontane area of villages with a low population. The only other area with a small population per village is in the Lower Bari Doab Colony between Khanewal and Chunian. The villages in this area should tend to increase in size in future years, though the rate of their doing so will be restricted unless the peculiar deflocculated condition of the soil particles which renders the soil of large tracts in this colony * practically unculturable. can be remedied.

56. Closely associated with the population of each village is the area of land comprised within the revenue limits of each. The averages worked out for purposes of diagram 23 are based on the same tahsil areas as those used in section 6, namely, the area of a tahsil less the so-called revenue area of the towns within the tahsil. For details subsidiary Table X may be referred to. As was to be expected the correspondence between the average area of villages and the average population of tahsils, is by no means complete, the correlation being represented by the co-efficient 0·572, a relationship which is still further Area of villages.

*When dry the true 'bara' soil approaches the hardness of talc.

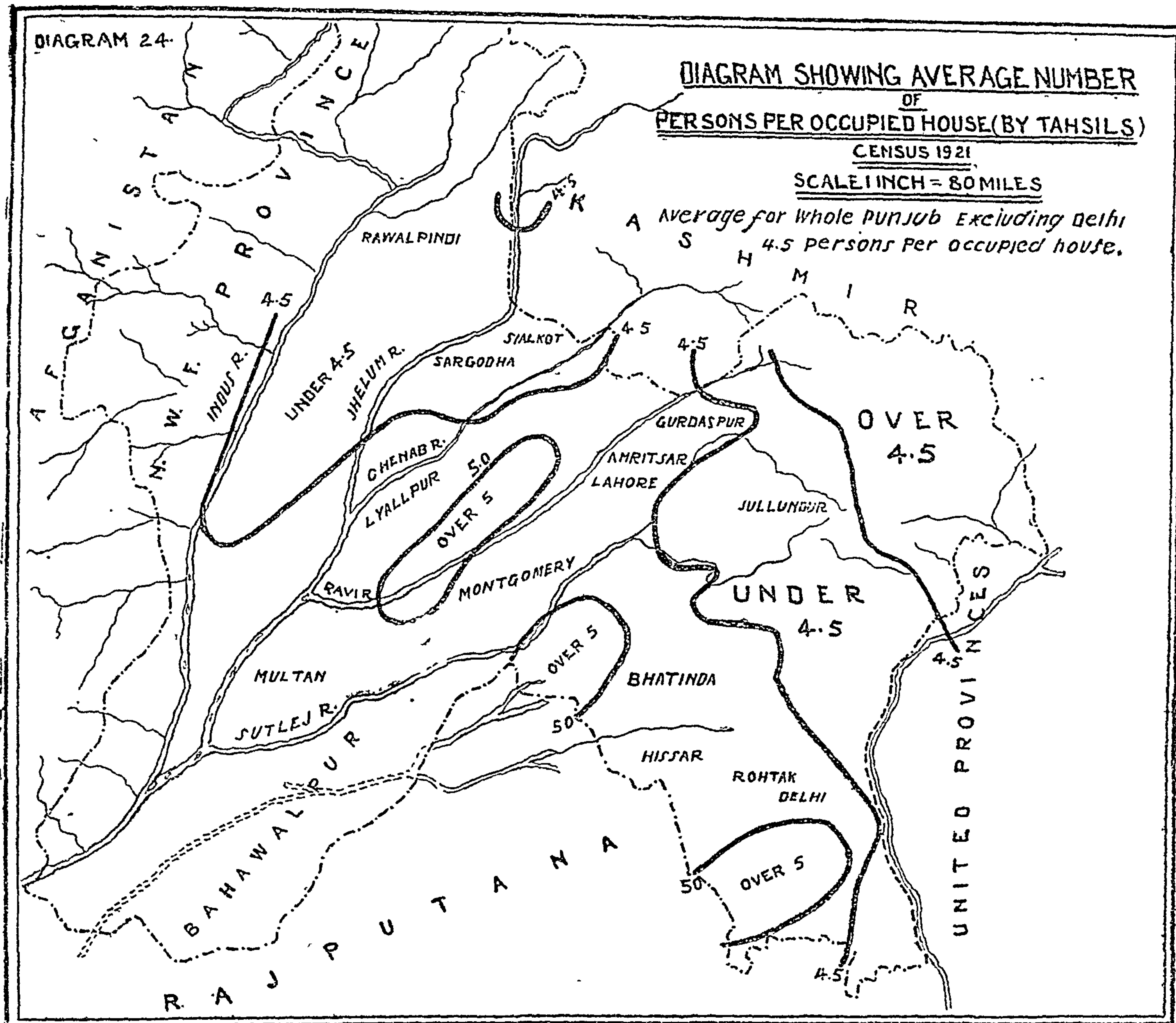
diminished when the effect of the number of persons per house has been eliminated. This point is discussed in paragraph 58.



57. While we have seen that the population density, the average size of villages in each tahsil and the average area of each village by tahsils have a variation in magnitude which is an obvious function of the population drift, of climatic conditions, and irrigational faculties, it is interesting to note a relative constancy represented by a co-efficient of variation of 8 per cent., in the habits of the rural population, and that is in respect of the average number of persons per occupied house. Diagram 24 shows the territorial variation of the number of persons per occupied house, the isopleths being again drawn from the tahsil figures which are reproduced in subsidiary Table XI. The average number of persons per occupied house for the whole of the Punjab, excluding Delhi, is 4·5 persons, and it will be observed that the number of persons per occupied house never rises above 5·7 for Samundri tahsil of the Lyallpur District, and never falls below 3·6, its value for the Chakwal tahsil of the Jhelum District. In the Punjab states the same constancy is noticeable, the only exception being Malerkotla, which has the remarkably small figure of 2·7 persons per occupied house. The explanation suggested to me by a high official familiar with the local conditions, is that the figure 2·7 represents the smallness of the families in Malerkotla, consequent on the inferior economic conditions of this tract. This explanation has no doubt considerable weight, but it hardly bridges the enormous

Number of persons per occupied house in villages.

gap between the number of persons per house in Malerkotla and the rest of the Punjab.



As the point is of considerable interest from an economic point of view, a closer statistical analysis will be desirable.

Excluding Malerkotla, the observed frequencies of Tahsils or States in the Punjab, which have a given number of persons per occupied house, is as noted in the margin.

Persons per house.	Frequency.	Persons per house.	Frequency.
3·6 ..	1	4·7 ..	16
3·7 ..	1	4·8 ..	13
3·8 ..	0	4·9 ..	8
3·9 ..	2	5·0 ..	5
4·0 ..	5	5·1 ..	2
4·1 ..	10	5·2 ..	1
4·2 ..	9	5·3 ..	1
4·3 ..	11	5·4 ..	3
4·4 ..	13	5·5 ..	1
4·5 ..	16	5·6 ..	0
4·6 ..	12	5·7 ..	1

This frequency distribution gives the following values for the moments about the mean, the mean itself being at 4·546 persons per occupied house :—

$$\mu_2 = 0{\cdot}1313$$
$$\mu_3 = 0{\cdot}0165$$
$$\mu_4 = 0{\cdot}0656$$

From which we obtain—

$$\beta_1 = 0{\cdot}12 \pm 0{\cdot}16$$
$$\beta_2 = 3{\cdot}81 \pm 1{\cdot}17$$

Thus both β_1 and $\beta_2 - 3$ differ from zero by less than their probable errors arising from random sampling, and therefore the distribution is of the Gaussian type. The appropriate curve to fit the data has the equation

$$Y = 14{\cdot}423 e^{\frac{-(X - 4{\cdot}546)^2}{{\cdot}2626}},$$

referred to zero persons per house as origin.

Now if the social and economic conditions of Malerkotla are continuous with those of the Punjab generally in respect of the number of persons per house, we can calculate the probability that it forms a part of the aforesaid Gaussian distribution. Malerkotla has 2·7 persons per occupied house, and that differs from the mean by 5·07 times the standard deviation. As the area of the Gaussian curve to the left of this is $1·987 \times 10^{-7}$ of the whole, the probability that out of 132 states and tahsils, one should have only 2·7 persons per occupied house is $2·63 \times 10^{-5}$ or about 1 in 38,000. A dispassionate statistician, therefore, examining the figures from a distance, might justifiably lay odds of nearly 38,000 to 1 against Malerkotla being in the Punjab!

As Malerkotla *is* in the Punjab, and is very centrally situated at that, the only conclusions we can come to seem to be either,

(1) that the economic and social life of Malerkotla are most abnormal, the explanation being probably that suggested by the official referred to above, or

(2) that the enumeration of persons or houses, is incorrect, the inaccuracy vitiating the conclusion as to the 'normal' character of the general Punjab distribution, or, that there is a particularly large inaccuracy in the Malerkotla census.

As to alternative (2) the enumeration in Malerkotla gave 80,322 persons and 30,096 occupied houses, so that an error of 3,322 in the number of occupied houses, or of 9,996 in the number of persons would be required to bring the number of persons per occupied house to 3·0, which even then would form a very marked outlier from the general Punjab distribution. Both these are errors of over 10 per cent., and this is more than we ought to expect; but that there is some error of enumeration seems an unavoidable deduction from the argument, unless we invoke the aforesaid rare hazard of a 1 in 38,000 chance.

The average number of persons per house for the Punjab States is 4·5, exactly the figure for British Districts only.

Inter-relationship of population per village, of area per village, and of persons per occupied house.

58. For a full examination of the effect of the area of villages, and of the number of persons per occupied house, on the population, it would be necessary to take each village separately. This would entail an amount of labour disproportionate to the issue, until such time as Government ceases to require that Reports shall consist of soporific literature only.

Herein, therefore, only the correlations of these associated conditions have been calculated for tahsil averages only: and, further, to secure homogenity, certain tahsils, which have special populations or areas, owing to their proximity to the frontiers of the Province, have been omitted. These tahsils are Kulu, Hamirpur, Khushab, Pindigheb, Talagang, Mianwali, Bhakhar, Isakhel, Sanawan, Leiah and the Biloch Trans-Frontier. This leaves 103 tahsils and Delhi Province, or 104 units in all, for comparison.

The following crude correlations result:—

Correlation of population and village.. .. $= ·572 \pm ·045$

Correlation of population and number of persons per occupied house .. .. $= ·337 \pm ·059$

Correlation of area of village and number of persons per occupied house .. .. $= ·282 \pm ·061$

All these correlations are over 4 times their probable errors, and, were the matter to be left there, one might suppose that there was an association between the average area of villages and the average number of persons per occupied house.

The suggested dependence, however, would be erroneous, as further examination will show. For convenience the population of a village will be called 'P', its 'revenue' area 'A', and the number of persons per occupied house 'H'. The letters all denote tahsil averages. The full results are then as follows:—

	Mean.	Standard deviation.	Co-efficient of variation.
Population	580 persons	251·46	43·4 %
Area	2·5 sq. miles	1·474	59·0 %
Persons per house	4·5 persons	·381	8·5 %

The partial correlation co-efficients which represent the association of any two of the variables, when the effects of association with the third variable have been eliminated, are—

Population and area .. $r_{A.P.H.} = \cdot528 \pm \cdot048$
Population and number of persons per house .. $r_{H.P.A.} = \cdot224 \pm \cdot050$
Area of village and number of persons per house .. $r_{A.H.P.} = \cdot115 \pm \cdot065$

Thus, we see that $r_{A.H.P.}$ is less than double its probable error, and there is no true association between the area of the village and the number of persons per occupied house.

The conclusions we may draw tentatively (subject always to the limitation imposed by averaging Tahsil figures) are that the villages with the larger area have the larger population, and that the villages with the larger population have the greater number of persons per house: but, we are definitely *not* entitled to conclude that the villages with the larger area have the greater number of persons per occupied house.*

We finally reach the following equations expressing the probable population average of the villages of a Tahsil in terms of the average area and the number of persons per house, with similar expressions for the average area. and for the persons per house—

$$P = 88\cdot372A + 126\cdot479\,H - 219\cdot086$$
$$A = \cdot003\,P + \cdot388\,H + \cdot986$$
$$H = \cdot034\,A + \cdot0004\,P + 4\cdot183$$

If we call $\triangle P$, $\triangle A$, and $\triangle H$ the proportional departures of P, A and H relative to their standard deviations the above equations reduce to—

$$\triangle P = \cdot518\triangle A + \cdot192\,\triangle H$$
$$\triangle A = \cdot682\triangle P + \cdot100\,\triangle H$$
$$\triangle H = \cdot132\triangle A + \cdot264\,\triangle P$$

Thus the Tahsil average population of a village is increased 5 % for a 10 % increase of average area, but is increased less than 2 % for a 10 % increase in the number of persons per occupied house.

Similar results may be deduced for the effect of variations of population per village, and of persons per house, on the probable area of the village. From a sociological point of view, however, probably the last equation is the most important, as it shows that 10 % changes in the area of villages, or in the population, produce changes of only 1·3 and 2·6 % respectively in the number of persons per house. This result is consistent with the conclusion that the number of persons per house is practically uninfluenced by the changes in population, or by the changes in the average areas of villages from Tahsil to Tahsil.

Boundary and village site positional efficiency.

59. Frequently as important as, sometimes even more important than the area of a village available for cultivation, is the position of the village site in that area, and the form of the boundary. The point to be considered is that a cultivator in order to plough his land has to reach it, and must, unless he builds a special cottage near his own fields—an exceptional occurrence in the Punjab—walk daily to and from his house to the fields, taking with him his plough and bullocks. His womenfolk, too, unless they are high caste Mohammedans, will have to travel an equal distance to bring the cultivator his midday meal.

The consequence is that in addition to the 15 miles of soil which the cultivator and bullocks have to cover in order to plough a single acre of land, there is added the double distance from the village site to the cultivator's fields. This is not a matter of which the mere consolidation of holdings, however, efficiently carried out can be a complete remedy. There is an irreducible minimum of distance which has to be travelled by the cultivator, independently of the proximity of his fields one to another, and this irreducible minimum I propose to call "the mean scalar distance." This mean scalar distance is thus a mathematical concept, a full expression for which, and the calculation of its values in certain theoretical and practical cases is considered in greater detail in Appendix 3 to this Report.

Clearly the most efficient boundary-shape of the village area, and the most efficient precincts of the village site will be those for which the mean scalar distance is a minimum. There are thus two possibilities.

* The argument above merely gives quantitative precision to the syllogism 'some A is B, some B is C. Therefore some A is not necessarily C.'

Firstly, that the village boundary should be altered so as to make its shape approximate to its most efficient form.

Secondly, that the village site should be in a position in which the mean scalar distance is a minimum for the particular boundary.

Thus, in regard to shape it is clear that a circular boundary with the village site in the centre makes the mean scalar distance less than for any other boundary or position. As, however, it is impossible for all villages to have a circular boundary without leaving a lot of intervening waste-ground, the most efficient boundary for a number of villages of equal area is hexagonal. So long as villages have the same area there are only 3 possible regular figures which can represent their contours. These are the Hexagon, Square, and Equilateral Triangle, and the following results have been obtained for their mean scalar distances from their respective centres :—

Shape of boundary.	Mean Scalar Distance from centre of figure.
Circle	·376126 × square root of area.
Hexagon	·377197 × square root of area.
Square	·382598 × square root of area.
Equilateral Triangle	·403647 × square root of area.

If therefore we take a village of 2·7 square miles in area, which is the average size of a village in the Punjab, we find that the cultivator has to travel, on an average, $1\frac{1}{4}$ miles each working day in simply going to and from his fields. This is the most favourable case of a village with an hexagonal boundary, with the village site in the centre. All this distance may be regarded as wasted effort, and this fact, no doubt, has limited practically the size of Punjab villages.

As regards the position of the village site in relation to the boundary this is even more important, as entailing wasted time and labour in travelling to and from the fields, than is the shape of the boundary. For example, we have the following values for the mean scalar distance from the vertex of the triangle :—

Figure.	Mean Scalar Distance from the Vertex.
Equilateral Triangle	·923940 × square root of area.
Isosceles right-angled triangle from the vertex containing the right angle	·765196 × square root of area.
Isosceles Triangle from the vertex with an angle of 120°	·699137 × square root of area.

These values show how enormously the mean scalar distance is increased as the village site departs from its central position.

The practical calculation of the scalar mean distance for some actual villages with irregular boundaries is given in Appendix 3. The concept will repay full mathematical examination.

Number of Persons per Building in selected towns and cities.

60. A special building census was held in February 1921 in Lahore City, Lahore Civil Station, Amritsar City, Jullundur City and Rawalpindi City and the results obtained, which are exhibited in Subsidiary Table XII, might have been extremely valuable but for the fact that they appear to be vitiated by serious errors. Thus if we take columns 10—18 of Subsidiary Table XII for wards 1—6 of Lahore City and calculate from it the number of inhabitants in those wards on the assumption that the centroid of the frequency of group 1—5 inhabitants is at 2, that the centroid of the frequency of group 6—10 inhabitants is at 7 and so on, we find that the total number of inhabitants in wards 1—6 works out at 117,140 as against a census figure of only 92,533. This excess of nearly 25,000 persons cannot be explained by the difference in date of only one month between the building census and the census proper, and the only conclusion appears to be is that in the

building census figures the recorded number of inhabitants per occupied building represents the total family whether some members of the family happened to be residing elsewhere or not. The same uncertainty does not attach to the figures for the number of persons per occupied house (with the exception of Malerkotla State) quoted in paragraph 8 above, and it is possible, therefore, that the greater number of persons per building in the towns somewhat exaggerates the relative congestion in towns as compared to villages.

For purposes of the building census the following definition was adopted :—

"Every building which is entirely separate from, or has no internal means of communication with, the adjoining buildings, constitutes a separate building, for the purposes of this schedule. Any building with one common entrance constitutes one building only, no matter how it is divided up internally. For instance a *serai* forms one building: a *haveli* built round a courtyard forms one building: but if a row of houses is all built adjoining each other, but have separate entrances from the street and no internal means of communication with one another, they form separate buildings."

The following figures of the number of inhabitants per inhabited building may now be noted :—

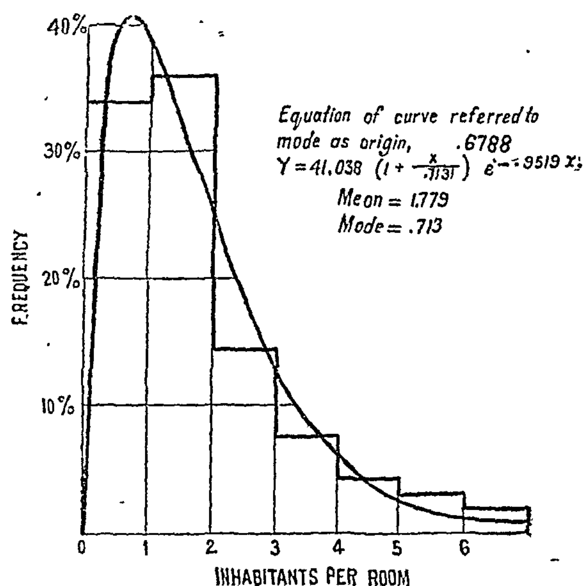
City and ward.	Inhabitants.	Inhabited houses.	Inhabitants per inhabited building.
Lahore City—			
Ward 1	11,924	3,171	3·760
„ 2	21,436	6,058	3·538
„ 3	18,238	3,112	5·860
„ 4	11,672	2,590	4·507
„ 5	20,145	1,905	10·575
„ 6	9,118	1,615	5·646
Total	92,533	18,451	5·015
Civil Station	44,857	10,378	4·322
Rawalpindi City—			
Ward 1	6,158	800	7·697
„ 2	1,492	203	7·350
„ 3	1,065	35	30·429
„ 4	1,752	358	4·891
„ 5	3,768	564	6·681
„ 9	5,979	983	6·082
„ 10	1,720	327	5·260
Total	21,934	3,270	6·708

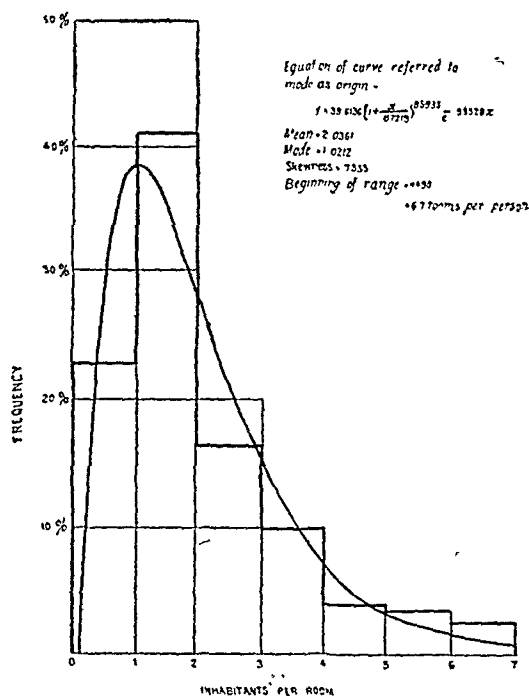
The figures for ward 3 of Rawalpindi City suffer from some serious inaccuracies of which the Rawalpindi Municipality has no explanation to offer, arising most probably from doubt as to the ward boundaries, a doubt which exists even in respect of Lahore, Capital City though it is.

Number of inhabitants per room.

61. From the point of view of health, so far as this is affected by congestion, the number of inhabitants per room is even more important than the number of persons per inhabited building.* The required information is given in columns 26—30 of Subsidiary Table XII, which shows the frequency of the number of buildings, with the number of persons per inhabited room, between stated limits. For statistical purposes the limits adopted in the building census are not fine enough for accurate curve-fitting ; but in the case of Amritsar City, for which the original schedules were available, I was able to get a slightly finer grouping at the beginning of the range. A frequency curve of type III has been fitted to the data of division 11 (the most congested division of Amritsar City), and to the whole of Amritsar City comprised in divisions 9, 10 and 11. The results are shown

*But in this connection it must be borne in mind that among the poorer classes, the number of persons per inhabited room is practically the same as the number of persons per inhabited building, so many of their houses consisting only of a single living room. That 5 or more persons should be able to sleep for 7 or 8 hours in a closed room (probably with their heads under their *resais* as well) of perhaps only 2,000 cubic feet, whereas the allowance for health is usually put at 3,000 cubic feet per hour per person, is a matter which might well be investigated by a physiologist.





graphically in diagrams 25 and 26. It should be noted that for the whole of Amritsar City the mean number of inhabitants per inhabited room is 1·779, while for division 11 it is 2·036 inhabitants. In division 11 again the modal, or the most commonly occurring case is to find 1·021 persons per inhabited room, while in the whole of Amritsar the most commonly occurring case is that for ·713 persons per inhabited room. Thus in the whole of Amritsar City the most usual condition is to find rather more than one room per person, while in congested division 11 the most frequent occurrence is to find just under one room per person. It is interesting to observe that in the case of division 11 the beginning of the range of the fitted curve is at ·149. corresponding to 6·7 rooms per person, while in the case of the whole of Amritsar City the range begins at ·0154 corresponding to 65 rooms per person. Whether in fact in Amritsar there is a plutocrat living solitarily in some vast mansion with this number of rooms, I am unable to say, but the conclusion is suggested by the above calculations, and it is not inconsistent with the largeness of Amritsar's population, and the known wealth of its Khatri traders.

Reference to the Statistical Tables.

62. It has not been possible to do more at this stage of the Census than attempt here and there descriptions, in as precise a mathematical form as may be, of the salient features of the distribution of the population in rooms, houses, villages, towns and cities. The broad outlines of such distributions have been described again and again, and it will serve no purpose to re-iterate the commonplaces as to the conditions of Punjab urban and rural life. The discussion of the inter-relationship of the various factors, which govern such distributions, is, no doubt, fascinating. But we must

(1) be sure of our facts, and

(2) express them in precise quantitative form

before attempting to examine the causal *nexus* which binds them. Disregard of these two important points has led to much premature, and, at times, valueless speculation. Keplerian description (*parvis componere magnis*) must precede Newtonian theory, and to attempt to reverse the order of discovery has led to vast waste of paper and print.

The following references will help those who wish to pursue at leisure particular lines of enquiry :—

Imperial Table I shows the population by sexes in urban and rural areas separately. It also shows the number of occupied houses in towns and villages for all the Punjab districts and states and for the Delhi Province. It is interesting to note that this table shows that the congestion of persons in houses in rural areas is greater than it is in the towns, as the average for the whole of the Punjab is 4·56 persons per house in the rural areas as against only 4·40 persons per house in Punjab towns. The data only refer to occupied houses.

Imperial Table III gives the towns and villages classified by population. The unit of grouping in this table is not uniform and this makes them difficult to manipulate from a statistical view-point. A classification with an equal base unit of 500 persons up to a range of 20,000 has already been given in para. 55 above. Imperial Table III will enable the classification to be continued above the range of 20,000 inhabitants per town or village.

Imperial Table IV gives the towns classified by population with variation since 1881, and may be referred to in connection with subsidiary tables 7 and 8 which have already been discussed in paragraph 52.

Imperial Table V shows the towns arranged territorially with population by religion, further analysis of which will be made in Chapter IV in considering the relative tendency of certain religious groups to congregate in towns.

Imperial Table VII, part (*c*), gives the details of age, sex and civil condition for cities and selected towns, a list of these being given in the margin.

Lahore City.	Jullundur Town.
Amritsar City	Sialkot Town.
Multan City.	Ferozepore Town.
Rawalpindi Town.	Delhi City.
Ambala Town.	

Imperial Table VIII (C) gives details of literacy by religions and age for the same cities and selected towns as those mentioned above.

Imperial Table XI (B) gives the details of birth-place by districts for cities and selected towns.

Imperial Table XVII gives the details of occupation by districts, states and cities, as to which the reader may be referred to Chapter XII for further information.

I. Distribution of the population between towns and villages. II. Number *per mille* of the total population of each main religion who live in towns. III. Towns classified by population. IV. Cities and Selected Towns. V. Distribution of population in groups of places according to size, and in Rural Territory from 1891 to 1921. VI. Population of urban classes and of rural territory as constituted in 1921 with increase. VII. Population of places classed as Towns in each of the last five Censuses according to the Population classes in 1921. VIII. Increase (+) or decrease (−) in the Population of Towns in the inter-censal periods. IX. Rural Density of tahsils (British Territory only). X. Persons and area per village of tahsils (British Territory only). XI. Persons per house in tahsils of British Territory and States. XII. Results of Building Census.

SUBSIDIARY TABLE I.

Distribution of the population between towns and villages.

District or State and Natural Division.	Average population per		Number per *mille* residing in		Number per *mille* of the urban population residing in towns with a population of				Number per *mille* of the rural population residing in villages with a population of			
	Town.	Village.	Towns.	Villages.	20,000 and over.	10,000 to 20,000	5,000 to 10,000.	under 5,000.	5,000 and over.	2,000 to 5,000	500 to 2,000.	Under 500.
1	2	3	4	5	6	7	8	9	10	11	12	13
PUNJAB	**13,981**	**498**	**103**	**897**	**563**	**160**	**208**	**69**	**23**	**153**	**544**	**280**
I.—Indo-Gangetic Plain West ..	**16,776**	**553**	**136**	**864**	**612**	**179**	**160**	**49**	**20**	**161**	**565**	**254**
1.—Hissar	21,588	760	106	894	633	367	..	..	40	206	599	155
2.—*Loharu State*	2,339	273	113	887	..	..	..	1,000	..	..	241	759
3.—Rohtak	10,765	965	98	902	335	316	349	..	33	287	574	106
4.—*Dujana State*	4,127	700	160	840	..	..	..	1,000	..	110	646	244
5.—Gurgaon	7,600	460	89	911	380	..	334	286	..	145	498	357
6.—*Pataudi State*	3,342	369	185	815	..	..	..	1,000	..	145	486	369
7.—Karnal	16,244	538	98	902	618	330	..	52	65	183	484	268
8.—Jullundur	14,606	578	142	858	608	..	352	40	16	138	592	254
9.—*Kapurthala State*	11,926	402	126	874	..	772	228	..	..	123	467	410
10.—Ludhiana	25,997	570	137	863	665	227	108	..	..	119	628	253
11.—*Malerkotla State*	24,564	485	306	694	1,000	..	..	..	..	74	601	325
12.—Ferozepore	24,524	655	106	894	408	331	128	73	11	158	615	216
13.—*Faridkot State*	13,183	714	175	825	..	1,000	..	..	..	109	706	185
14.—*Patiala State*	13,643	374	100	900	587	77	309	27	4	142	527	327
15.—*Jind State*	8,355	629	109	891	..	647	353	..	..	91	654	255
16.—*Nabha State*	6,862	453	156	844	..	358	484	158	..	67	554	379
17.—Lahore	50,124	695	310	690	892	59	39	10	24	226	566	184
18.—Amritsar	36,981	719	199	801	866	..	134	..	8	163	644	185
19.—Gujranwala	15,167	450	122	878	500	216	193	61	9	94	501	396
20.—Sheikhupura	4,204	559	24	976	..	..	..	1,000	65	143	540	252
II.—Himalayan	**7,071**	**320**	**33**	**967**	**486**	..	**323**	**191**	**92**	**234**	**381**	**293**
21.—*Nahan State*	5,756	133	41	959	..	..	1,000	..	..	..	173	827
22.—Simla	10,273	70	680	320	892	..	..	108	..	..	39	961
23.—*Simla Hill States*	..	165	..	1,000	..	..	..	..	..	126	375	499
24.—*Bilaspur State*	..	103	..	1,000	..	..	..	..	..	43	109	848
25.—Kangra	4,904	1,068	6	994	..	..	..	1,000	164	305	432	99
26.—*Mandi State*	6,870	1,080	37	963	..	..	1,000	..	..	186	780	34
27.—*Suket State*	2,554	183	47	953	..	..	..	1,000	..	..	21	979
28.—*Chamba State*	5,668	2,724	40	960	..	..	1,000	..	214	619	164	3
III.—Sub-Himalayan	**13,075**	**422**	**92**	**908**	**592**	**75**	**254**	**79**	**6**	**112**	**490**	**392**
29.—Ambala	14,803	329	174	826	645	97	193	65	..	80	382	[illegible]
30.—*Kalsia State*	4,046	280	141	859	..	..	..	1,000	..	96	329	[illegible]
31.—Hoshiarpur	11,617	421	38	962	611	..	389	..	6	98	519	[illegible]
32.—Gurdaspur	6,873	352	73	927	422	..	263	315	..	78	428	[illegible]
33.—Sialkot	21,784	385	93	907	810	..	152	38	6	78	456	[illegible]
34.—Gujrat	11,505	542	56	944	477	235	288	..	..	122	[illegible]	[illegible]
35.—Jhelum	10,244	492	86	914	..	441	559	..	..	154	[illegible]	[illegible]
36.—Rawalpindi	52,217	397	183	817	968	..	..	32	..	115	[illegible]	[illegible]
37.—Attock	6,857	776	67	933	..	..	995	5	43	[illegible]	[illegible]	[illegible]
IV.—North-West Dry Area ..	**10,088**	**591**	**73**	**927**	**369**	**215**	**303**	**113**	**24**	[illegible]	[illegible]	[illegible]
38.—Montgomery	10,245	372	43	957	..	475	525	..	[illegible]	[illegible]	[illegible]	[illegible]
39.—Shahpur	7,214	653	110	890	..	564	223	213	..	[illegible]	[illegible]	[illegible]
40.—Mianwali	7,484	875	84	916	..	..	1,000	..	[illegible]	[illegible]	[illegible]	[illegible]
41.—Lyallpur	13,600	829	42	958	690	..	310	..	..	[illegible]	[illegible]	[illegible]
42.—Jhang	14,253	524	100	900	529	307	93	71	..	[illegible]	[illegible]	[illegible]
43.—Multan	32,394	482	109	891	873	..	127	..	14	[illegible]	[illegible]	[illegible]
44.—*Bahawalpur State*	8,592	732	44	956	..	538	240	222	21	[illegible]	[illegible]	[illegible]
45.—Muzaffargarh	4,804	641	42	958	..	..	577	423	19	[illegible]	[illegible]	[illegible]
46.—Dera Ghazi Khan	7,208	619	102	898	411	..	361	228	108	231	[illegible]	[illegible]
DELHI	**3,04,420**	**585**	**624**	**376**	**1,000**	..	..	..	**35**	**117**	**571**	[illegible]
I.—Indo-Gangetic Plain West ..	**304,420**	**585**	**624**	**376**	**1,000**	..	..	..	**35**	**117**	**571**	**277**
1.—Delhi	3,04,420	585	624	376	1,000	..	..	..	35	117	571	277

SUBSIDIARY TABLE II.

Number per *mille* of the total population of each main religion who live in towns.

Natural Division.	Number per *mille* who live in towns.							Remarks.
	Population.	Hindu.	Musalman.	Christian.	Jain.	Sikh.	Parsi.	
1	2	3	4	5	6	7	8	9
PUNJAB	103	119	102	160	519	52	932	For details of the Natural Divisions see Subsidiary Table No. I.
I.—Indo-Gangetic Plain West ..	136	137	175	161	460	51	950	
II.—Himalayan	33	25	135	850	421	195	1,000	
III.—Sub-Himalayan	92	120	80	183	801	59	892	
IV.—North-West Dry Area	73	195	53	77	676	50	860	
DELHI	624	535	809	660	822	966	1,000	
I.—Indo-Gangetic Plain West ..	624	535	809	660	822	966	1,000	

SUBSIDIARY TABLE III.

Towns classified by population.

Class of Towns.	Number of Towns.	Proportion to total urban population.	Number of females for 1,000 males.	Increase per cent. in the population of places classed as towns at the former of the two Censuses in each sub-column.				Increase per cent. in the urban population of each class from 1881-1921.	
				1911-1921.	1901-1911.	1891-1901.	1881-1891.	(a). In places classed as towns in 1881.	(b). In the total of each class in 1921, as compared with the corresponding total in 1881
1	2	3	4	5	6	7	8	9	10
PUNJAB INCLUDING PUNJAB STATES ..	186	1	719	+ 7·3	— 2·9	+ 4·7	+ 7·5	+21·0	+ 4·8
I.—1,00,000 and over ..	3	·21	576	+15·9	+ 4·4	+16·5	+ 4·1	+46·7	+80·3
II.— 50,000—1,00,000 ..	6	·16	714	+ 1·6	+ 3·2	+ 5·9	+18·6	+29·1	+38·7
III.— 20,000— 50,000 ..	19	·19	734	+ 9·2	— 3·0	— ·6	+ 9·3	+16·6	+31.6
IV.— 10,000— 20,000 ..	30	·16	753	+12·8	— 7·8	+ 3·4	+ 6·3	+12·3	+ ·8
V.— 5,000— 10,000 ..	77	·21	824	+ 3·3	— 8·1	+ 3·1	+ 4·1	+ 6·3	—22·9
VI.—Under 5,000 ..	51	·07	781	— 4·2	— 2·8	+ 1·6	+ 6·5	+40·6	—53·1
DELHI	1	1	672	+30·7	+11·6	+ 8·3	+11·1	+75·5	+75·5
I.—1,00,000 and over ..	1	1	672	+30·7	+11·6	+ 8·3	+11·1	+75·5	+75·5

NOTE.—The table is of slight value owing to the changes of definition of the term 'town', and the variations in the number of towns in each class in the different censuses.

SUBSIDIARY TABLE IV.

Cities and Selected Towns.

36 Han... 38 ... 39bha .. Montgomery Kotkapura Fazilka .. Sonepat.. Faridkot

...lected Town.	Population in 1921.	Number of persons per square mile.	Number of females to 1,000 males.	Population of foreign born per *mille*.	Percentage of variation.				
					1911-1921.	1901-1911.	1891-1901.	1881-1891.	Total 1881-1921.
1	2	3	4	5	6	7	8	9	10
Basi	281,781	6,715	571	546	+23·2	+12·7	+14·8	+12·4	+79·1
Jagadhri	160,218	16,534	685	221	+ 4·9	— 6·0	+18·8	—10·0	+ 5·5
Phagwara	84,806	6,494	760	265	—14·5	+13·6	+17·2	+ 8·6	+23·5
Shahabad ...wn ..	101,142	11,802	441	637	+16·9	— 1·4	+18·8	+39·3	+90·9
Jind	76,326	4,549	667	449	— 4·7	+ 1·9	— ·8	+17·5	+13·1
Jhajjar .. ...wn ..	71,008	3,552	749	347	+ 2·4	+ 2·3	+ 2·3	+27·0	+36·2
Sangrur ...n	70,619	5,934	721	335	+ 8·9	+11·9	+ 5·2	+20·4	+54·3
Ferozepore Town ..	54,351	4,941	663	522	+ 6·9	+ 3·0	— 2·2	+27·5	+37·3
Delhi City	304,420	4,675	672	479	+30·7	+11·6	+ 8·3	+11·1	+75·6

SUBSIDIARY TABLE V.

Distribution of population in groups of places according to size, and in Rural Territory 1891 to 1921.

Class of place.	1921.		1911.		1901.		1891.		Per cent. of total population.			
	No. of places.	Population.	No. of places.	Population.	No. of places.	Population.	No. of places.	Population.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13
Total population of the Punjab ..	45,408	25,101,060	..	23,791,367	..	24,366,625	..	22,915,482	100·0	100·0	100·0	100·0
Urban Territory ..	186	2,596,678	173	2,334,415	224	2,580,798	220	2,414,183	10·3	9·8	10·6	10·7
I.—Towns of 10,000 and over ..	3	543,141	2	381,443	2	365,393	2	313,620	2·2	1·6	1·5	1·4
II.—Towns of 50,000 to 100,000	6	408,990	6	450,880	6	432,956	7	455,233	1·6	1·9	1·8	2·0
III.—Towns of 20,000 to 50,000	19	510,687	13	367,517	13	379,814	13	319,201	2·0	1·5	1·6	1·5
IV.—Towns of 10,000 to 20,000	31	415,553	30	432,155	34	490,124	32	440,826	1·7	1·8	2·0	1·9
V.—Towns of 5,000 to 10,000	76	539,279	77	539,892	99	679,439	97	658,667	2·1	2·3	2·8	2·9
VI.—Towns of under 5,000	51	179,028	45	162,558	70	233,042	69	226,633	·7	·7	·9	1·0
Rural Territory ..	45,222	22,504,382	..	21,456,922	..	21,785,827	..	20,471,299	89 7	90·2	89·4	89·3
Total population of Delhi Province.	315	488,188	..	413,447	..	405,409	..	372,766	100·0	100·0	100·0	100·0
Urban Territory ..	1	304,420	1	232,837	1	208,575	1	192,579	62·4	56·3	51·4	51·7
I.—Town of 100,000 and over ..	1	304,420	1	232,837	1	208,575	1	192,579	62·4	56·3	51·4	51·7
Rural Territory ..	314	183,768	..	180,610	..	196,834	..	180,187	37·6	43·7	48·6	48·3

SUBSIDIARY TABLE VI.

Population of Urban Classes and of rural territory as constituted in 1921 with increase.

Class of places.		Number of places in 1921.	Population.		Increase 1911-1921.		Remarks.
			1921.	1911.	Number.	Per cent.	
1		2	3	4	5	6	7
Punjab, including Punjab States	a	45,384	24,977,915	23,791,367	1,309,693	5·5	
	b	24	123,145	..	..	..	
Territory Urban in 1921 ..	a	162	*2,473,533	*2,334,445	262,233	11·2	* These figures denote the proportion living in places classed as towns in both censuses, and are therefore comparable.
	b	24	123,145	..	..	..	
Towns having in 1921.							
I.—100,000 and over ..	..	3	543,141	467,926	75,215	16·1	
II.— 50,000 to 100,000 ..	..	6	408,990	408,567	423	·1	
III.— 20,000 to 50,000 ..	..	19	510,687	449,534	61,153	13·6	
IV.— 10,000 to 20,000 ..	a	28	391,157	347,001	68,552	19·8	...ıs,
	b	2	24,396	..	..	..	have
V.— 5,000 to 10,000 ..	a	68	485,140	457,419	81,860	17·9	...ate the
	b	9	54,139	..	..	..	discus-
VI.—Under 5,000 ..	a	38	134,418	155,115	23,913	15·4	
	b	13	44,610	..	..	..	...ributions,
Territory Rural in 1921 ..	a	45,222	†22,504,382	†21,456,922	1,047,460	4·9	† These figures d...
	b	24	123,145	..	..	..	...lation living out... classed as town... suses.
Delhi ..	..	315	488,188	413,447	74,741	18·0	
Territory Urban in 1921 ..	..	1	304,420	232,837	71,583	30·7	...regard
Territory Rural in 1921 ..	..	314	183,768	180,610	3,158	1·7	571

Foot-note.—The towns entered against "b" were not treated as towns in 1911, and their population in that year cannot be obtained.

SUBSIDIARY TABLE VII.

Places classed as Towns in each of the last five Censuses, according to the population classes in 1921.

Serial No.	Town.	Population. 1921	1911	1901	1891	1881
	1	2	3	4	5	6
	Class I.—100,000 and over.					
1	Lahore ..	281,781	228,687	202,964	176,854	157,287
2	Amritsar	160,218	152,756	162,429	136,766	151,896
3	Rawalpindi	101,142	86,483	87,688	73,795	52,975
	TOTAL	543,141	467,926	453,081	387,415	362,158
	Class II.—50,000 to 100,000.					
4	Multan ..	84,806	99,243	87,394	74,562	68,674
5	Ambala	76,326	80,131	78,638	79,294	67,463
6	Jullundur	71,008	69,318	67.735	66,202	52,119
7	Sialkot ..	70,619	64,869	57,956	55,087	45,762
8	Ferozepore	54,351	50,836	49,341	50,437	39,570
9	Ludhiana	51,880	44,170	48,649	46,334	44,163
	TOTAL	408,990	408,567	389,713	371,916	317,751
	Class III.—20,000 to 50,000.					
10	Patiala ..	47,531	46,974	53,545	55,856	53,629
11	Gujranwala	37,887	30,307	30,092	27,678	23,661
12	Bhiwani	33,270	31,100	35,917	35,487	33,762
13	Kasur	31,018	24,783	22,022	20,290	17,336
14	Jhang Maghiana	30,139	25,914	24,382	23,290	21,629
15	Simla	27,494	19,405	14,505	13,836	13,258
16	Panipat	27,343	26,342	26,914	27,547	25,022
17	Batala	26,122	26,430	27,365	27,223	24,281
18	Rohtak	25,240	20,361	20,323	16,702	15,699
19	Malerkotla	24,564	23,880	21,122	21,754	20,621
20	Rewari ..	23,129	24,780	27,295	27,934	23,072
21	Karnal ..	22,845	21,961	23,559	21,963	23,133
22	Gujrat ..	21,974	19,090	19,410	18,050	18,396
23	Hissar ..	21,415	17,162	17,647	16,854	14,167
24	Hoshiarpur	21,285	17,449	17,549	21,552	21,363
25	Dera Ghazi Khan	20,731	18,466	23,731	27,886	22,309
26	Narnaul	20,410	21,350	19,489	21,159	20,052
27	Bhatinda	20,154	15,037	13,185	8,536	5,084
	TOTAL	482,551	430,791	438,052	433,597	397,374
	Class IV.—10,000 to 20,000.					
28	Wazirabad					
29	Bahawalpur	18,645	17,146	18,069	15,786	16,462
30	Jhelum ..	18,494	18,414	18,546	18,716	13,635
31	Jagraon ..	18,060	19,678	14,951	12,878	21,107
32	Chiniot ..	17,731	15,039	18,760	18,116	16,873
33	Bhera ..	17,513	14,085	15,685	13,476	10,731
34	Kapurthala	17,027	15,202	18,680	17,428	15,165
35	Sirsa ..	16,242	16,307	18,519	16,747	15,237
36	Kaithal	16,241	14,629	15,800	16,415	12,292
37	Hansi	15,477	12,912	14,408	15,768	14,754
38	N[illegible] ..	15,425	14,576	16,523	15,190	12,656
39	[illegible]abha ..	14,750	13,620	18,468	17,108	17,116
40	Montgomery	14,601	8,129	6,602	5,159	3,178
41	Kotkapura	14,063	10,644	9,519	7,730	6,196
	Fazilka ..	13,829	10,985	8,505	7,563	6,851
	Sonepat ..	12,981	12,014	12,990	12,611	13,077
	Faridkot	12,304	11,673	10,405	8,319	6,593
	Basi ..	11,560	11,125	13,738	13,810	12,896
	Jagadhri	11,544	12,045	13,462	13,029	12,300
	Phagwara	11,395	11,779	14,108	12,331	10,627
	Shahabad	11,329	11,054	11,009	11,473	10,218
	Jind ..	10,840	8,783	8,047	8,116	7,136
	Jhajjar ..	10,800	10,617	12,227	11,881	11,650
	Sangrur	10,799	9,041	11,852	8,820	9,139
	Jalalpur Jattan	10,792	11,615	10,640	11,065	12,839
	Muktsar	10,539	8,834	6,389	5,271	3,125
	Patti	10,439	7,987	8,187	7,495	6,407
	Khushab	10,009	10,159	11,403	9,832	8,989
	TOTAL	373,429	338,152	357,492	332,133	307,249

SUBSIDIARY TABLE V.

Distribution of population in groups of places according to size, and in Rural Territory 1891 to 1921.

Class of place.	1921. No. of places.	1921. Population.	1911. No. of places.	1911. Population.	1901. No. of places.	1901. Population.	1891. No. of places.	1891. Population.	Per cent. of total population. 1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13
Total population of the Punjab ..	15,408	25,101,060	..	23,701,367	..	21,366,625	..	22,015,182	100·0	100·0	100·0	100·0
Urban Territory ..	186	2,596,078	173	2,331,445	224	2,580,798	220	2,111,183	10·3	9·8	10·6	10·7
I.—Towns of 10,000 and over ..	3	513,141	2	381,443	2	365,393	2	313,620	2·2	1·6	1·5	1·4
II.—Towns of 50,000 to 100,000	6	408,090	6	450,880	6	432,956	7	455,233	1·6	1·9	1·8	2·0
[illegible]—Towns of 20,000 to 50,000	19	510,687	13	367,517	13	370,841	13	349,201	2·0	1·5	1·6	1·5
[illegible] of 10,000 to 20,000	31	445,553	30	432,155	31	490,124	32	440,826	1·7	1·8	2·0	1·9
[illegible] 5,000 to 10,000	76	539,279	77	539,892	99	679,439	97	658,667	2·1	2·3	2·8	2·9
[illegible] 5,000	51	179,028	45	162,558	70	233,012	69	226,633	·7	·7	·9	1·0
[illegible] ..	15,222	22,504,382	..	21,456,922	..	21,785,827	..	20,171,299	89·7	90·2	89·1	89·3
[illegible]	[illegible]315	488,168	..	413,147	..	405,109	..	372,766	100·0	100·0	100·0	100·0
[illegible]	[illegible]	304,420	1	232,837	1	208,575	1	192,579	62·4	56·3	51·4	51·7
[illegible]	[illegible]	[illegible]20	1	232,637	1	208,575	1	192,579	62·4	56·3	51·4	51·7
[illegible]	[illegible]	[illegible]68	..	180,610	..	196,834	..	180,187	37·6	43·7	48·6	48·3

TABLE VI.

[illegible]ary as constituted in 1921 with increase.

1911-1921. Per cent.	REMARKS.
6	7
5·5	
..	
11·2	* These figures denote the proportion living in places classed as towns in both censuses, and are therefore comparable.
*1	

No.	Town				
55	Pin[illegible]				
56	Campb[illegible]				
57	Sumana				
58	Nakodar				
59	Pindi Gheb				
60	Palwal				
61	Mianwali				
62	Abohar				
63	Kamalia				
64	Gurdaspur				
65	Mohindargarh				
66	Kartarpur				
67	Leiah				
68	Kalabagh				
69	Hazro				
70	Raikot				
71	Urmar Tanda				
72	Sunam				
73	Ahmedpur Sharqi				
74	Sultanpur				
75	Jaitu				
76	Barnala				
77	Chunian				
78	Sadhaura	7,65[illegible]			
79	Rupar	7,606			
80	Jandiala	7,464	[illegible]		
81	Beri	7,454	7,708		
82	Chakwal	7,425	6,400		
83	Pathankot	7,353	7,007		
84	Jampur	7,317	6,51[illegible]		
85	Kunjah	7,240	7,0[illegible]		
86	Pakpattan	7,218	7,[illegible]		
87	Peshawar	6,909	7,[illegible]		
88	Dhanaula	6,886	6,[illegible]		
89	Mandi	6,870	7,[illegible]		
90	Nurmahal	6,845	7,[illegible]		
91	Shujabad	6,730	6,[illegible]		
92	Sahiwal	6,582	7,0[illegible]		
93	Dadri	6,532	5,7[illegible]		
94	Sanaur	6,532	6,3[illegible]		
95	Talagang	6,438	6,71[illegible]		
96	Hardo Daska	6,283	6,01[illegible]		
97	Bhakkar	6,193	5,388		
98	Isa Khel	6,172	6,808		
99	Khem Karan	6,152	5,732		
100	Dinga	6,014	5,351		
101	Tarn Taran	5,988	4,260		
102	Miani	5,965	5,819	7[illegible]	
103	Dharmkot	5,960	5,869	6,[illegible]	[illegible]
104	Bahadurgarh	5,935	4,990	5,974	8,103
105	Rahon	5,947	6,292	8,651	10,667
106	Hodal	5,854	5,468	8,142	9,601
107	Eminabad	5,816	5,526	6,491	5,841
108	Dajal	5,775	6,893	6,213	6,085
109	Nahan	5,756	6,341	6,256	6,121
110	Chamba	5,668	5,623	6,000	5,905
111	Majitha	5,664	5,223	6,403	6,417
112	Bhadaur	5,577	5,465	7,710	7,177
113	Muzaffargarh	5,386	4,387	4,018	3,64[illegible]
114	Nawashahr	5,316	4,475	5,641	5,6[illegible]
115	Hariana	5,205	5,395	6,005	7,[illegible]
116	Bawal	5,137	5,332	5,739	5,0[illegible]
117	Gurgaon	5,107	5,461	4,765	4,083
118	Gohana	5,107	5,438	6,567	7,690
119	Taunsa	5,103	5,065	5,200	4,413
120	Banga	5,089	4,602	4,697	5,010
	TOTAL	469,883	447,470	386,766	478,28[illegible]

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[illegible]ve

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[illegible]ned.

SUBSIDIARY TABLE VII.

Places classed as Towns in each of the last five Censuses, according to the population classes in 1921.

Serial No.	Town.	Population. 1921	1911	1901	1891	1881
	1	2	3	4	5	6
		CLASS I.—100,000 AND OVER.				
1	Lahore ..	281,781	228,687	202,964	176,854	
2	Amritsar	160,218	152,756	162,429	136,7[illegible]	
3	Rawalpindi	101,142	86,483	87,688	[illegible],188	4,102
					6,184	5,322
	TOTAL	543,141	467,926	453,081	5,990	7,374
				[illegible],087	5,796	6,039
			CLASS II.—[illegible]	6,986	6,957	7,107
4	Multan ..	84,806	99,243	7,121	6,592	6,830
5	Ambala	76,326	80,[illegible]78	4,001	4,356	3,492
6	Jullundur	71,008	[illegible]5,719	7,278	6,848	6,878
7	Sialkot ..	70,619	9,624	8,177	8,063	5,998
8	Ferozepore	54,351	4,487	5,310	5,929	7,427
9	Ludhiana	51,880				
		[illegible]3	4,556	5,118	5,750	5,956
	TOTAL	408,[illegible]26	4,719	5,066	6,111	6,005
		[illegible]13	9,192	8,611	7,494	7,189
		[illegible]202	4,246	5,520	5,674	5,389
		[illegible],127	4,482	4,476	4,924	4,595
10	Patiala ..					
11	Gujranwala	4,064	3,843	5,415	5,254	5,401
12	Bhiwani	4,047	4,154	5,191	5,454	5,589
13	Kasur	3,964	3,704	3,917	4,973	4,932
14	Jhang Maghiana	3,890	4,236	4,641	4,966	4,907
15	Simla	3,833	5,096	6,067	5,257	2,595
16	Panipat					
17	Batala	3,721	4,053	4,506	4,474	5,821
18	Rohtak	3,574	4,272	5,865	6,809	7,411
19	Malerkotla	3,539	3,503	3,243	2,833	2,723
20	Rewari ..	3,434	3,312	2,788	2,552	2,555
21	Karnal ..	3,430	3,566	3,042	2,503	1,479
22	Gujrat ..					
23	Hissar ..	3,405	4,223	5,343	4,203	4,235
24	Hoshiarpur	3,324	6,285	7,169	7,058	6,921
25	Dera Ghazi Khan	3,292	1,705	1,844	1,768	2,489
26	Narnaul	3,212	3,194	2,192	1,977	2,807
27	Bhatinda	3,204	2,589	3,487	3,624	3,353
	TOT[illegible]	3,184	3,349	3,621	3,505	3,417
		2,405	1,582	1,316	1,232	1,610
		2,339	2,343	2,175	2,431	2,038
		1,745	2,032	2,159	2,569	3,642
		1,581	1,847	2,177	2,171	2,329
28	Wazirabad	899	884	845	985	1,032
29	Bahawalpur	170	630	497	419	120
30	Jhelum ..					
31	Jagraon .. TOTAL	133,910	154,373	168,808	168,873	167,199
32	Chiniot ..					
33	Bhera .. [illegible]OTAL I—VI	2,411,904	2,247,279	2,193,912	2,172,223	2,005,098
34	Kapurthala					
35	Sirsa .. [illegible]HI ..	304,420	232,837	208,575	192,579	173,393
36	Kaithal					
37	Han[illegible]					
38	N[illegible]					
39	[illegible]					
40						
41						

Class of Population.	Population. 1921	1911	1901	1891	1881
1	2	3	4	5	6
TOTAL POPULATION PUNJAB ..	25,101,060	23,791,367	24,366,625	22,915,482	20,798,896
Urban Population (as per statement annexed) ..	2,411,904	2,247,279	2,193,912	2,172,223	2,005,098
Rural Population	22,689,156	21,544,088	22,172,713	20,743,259	18,793,798
Percentage of Urban Population on total Population ..	9·61	9·45	9·00	9·48	9·64

CHAPTER II.

SUBSIDIARY TABLE VIII.

Increase (+) or decrease (—) in the population of towns in the inter-censal periods.

Serial No.	Town.	1921.	1911.	1901.	1891.
1	2	3	4	5	6
	CLASS I.—100,000 AND OVER.				
1	Lahore	+	+	+	+
2	Amritsar	+	—	+	—
3	Rawalpindi	+	—	+	+
	CLASS II.—50,000 TO 100,000.				
4	Multan	—	+	+	+
5	Ambala	—	+	—	+
6	Jullundur	+	+	+	+
7	Sialkot	+	+	+	+
8	Ferozepore	+	+	—	+
9	Ludhiana	+	—	+	+
	CLASS III.—20,000 TO 50,000.				
10	Patiala	+	—	—	+
11	Gujranwala	+	+	+	+
12	Bhiwani	+	—	+	+
13	Kasur	+	+	+	+
14	Jhang-Maghiana	+	+	+	+
15	Simla	+	+	+	+
16	Panipat	+	—	—	+
17	Batala	—	—	+	+
18	Rohtak	+	+	+	+
19	Malerkotla	+	+	—	+
20	Rewari	—	—	—	+
21	Karnal	+	—	+	—
22	Gujrat	+	—	+	—
23	Hissar	+	—	+	+
24	Hoshiarpur	+	—	—	+
25	Dera Ghazi Khan	+	—	—	+
26	Narnaul	—	+	—	+
27	Bhatinda	+	+	+	+
	CLASS IV.—10,000 TO 20,000.				
28	Wazirabad	+	—	+	—
29	Bahawalpur	+	—	—	+
30	Jhelum	—	+	+	—
31	Jagraon	+	—	+	+
32	Chiniot	+	—	+	+
33	Bhera	+	—	+	+
34	Kapurthala	—	—	+	+
35	Sirsa	+	—	—	+
36	Kaithal	+	—	—	+
37	Hansi	+	—	+	+
38	Nabha	+	—	+	—
39	Montgomery	+	+	+	+
40	Kotkapura	+	+	+	+
41	Fazilka	+	+	+	+
42	Sonepat	+	—	+	—
43	Faridkot	+	+	+	+
44	Basi	+	—	—	+
45	Jagadhri	—	—	+	+
46	Phagwara	—	—	+	+
47	Shahabad	+	+	—	+
48	Jind	+	+	—	+
49	Jhajjar	+	—	+	+
50	Sangrur	+	—	+	—
51	Jalalpur Jattan	—	+	—	—
52	Muktsar	+	+	+	+
53	Patti	+	—	+	+
54	Khushab	—	—	+	+
	CLASS V.—5,000 TO 10,000.				
55	Pind Dadan Khan	—	—	—	—
56	Campbellpur	+	+	+	+
57	Sumana	+	—	+	+
58	Nakodar	+	—	+	+
59	Pindi Gheb	+	+	—	—
60	Palwal	—	—	+	+
61	Mianwali	+	+	+	+
62	Abohar	—	+	+	+
63	Kamalia	+	+	—	—
64	Gurdaspur	+	+	—	+
65	Mohindargarh	—	—	—	+
66	Kartarpur	—	—	+	+
67	Leiah	+	+	+	+
68	Kalabagh	+	+	—	+
69	Hazro	—	+	+	+
70	Raikot	+	—	+	+
71	Urmar Tanda	+	—	—	+
72	Sunam	+	—	—	—
73	Ahmedpur Sharqi	—	—	+	—
74	Sultanpur	+	—	+	+
75	Jaitu	+	+	+	+
76	Barnala	+	—	+	+
77	Chunian	+	—	—	+
	CLASS V.—5,000 TO 10,000-*concld.*				
78	Sadhaura	—	—	—	—
79	Rupar	+	—	+	—
80	Jandiala	+	—	+	+
81	Beri	—	—	—	+
82	Chakwal	+	—	+	+
83	Pathankot	+	+	+	+
84	Jampur	+	+	+	+
85	Kunjah	+	+	+	—
86	Pakpattan	—	+	—	+
87	Peshawar	—	—	—	+
88	Dhanaula	+	—	+	—
89	Mandi	—	—	+	+
90	Nurmahal	—	—	+	+
91	Shujabad	+	+	—	—
92	Sahiwal	—	—	—	+
93	Dadri	+	—	—	—
94	Sanaur	+	—	—	—
95	Talagang	—	+	+	0
96	Hardo Daska	+	—	+	—
97	Bhakkar	+	+	+	+
98	Isa Khel	—	—	+	+
99	Khem Karan	+	—	+	+
100	Dinga	+	—	—	+
101	Tarn Taran	+	—	+	+
102	Miani	+	—	+	—
103	Dharmkot	+	—	+	+
104	Bahadurgarh	+	—	—	—
105	Rahon	—	—	—	—
106	Hodal	+	—	—	+
107	Eminabad	+	—	+	—
108	Dajal	—	+	+	+
109	Nahan	—	+	+	+
110	Chamba	+	—	+	+
111	Majitha	+	—	—	+
112	Bhadaur	+	—	+	+
113	Muzaffargarh	+	+	+	+
114	Nawashahr	+	—	+	+
115	Hariana	—	—	—	+
116	Bawal	—	—	+	+
117	Gurgaon	—	+	+	+
118	Gohana	—	—	—	+
119	Taunsa	—	+	+	+
120	Banga	+	—	—	+
	CLASS VI.—UNDER 5,000.				
121	Phul	+	—	—	+
122	Dharmsala	—	—	+	+
123	Sohna	—	—	+	—
124	Sujanpur	—	—	—	—
125	Phillaur	—	—	+	—
126	Ramnagar	—	—	+	—
127	Zira	+	+	—	+
128	Ferozepur-Jhirka	—	—	+	—
129	Rojhan	—	+	+	+
130	Faridabad	—	—	—	—
131	Dera Baba Nanak	—	—	—	—
132	Thanesar	—	—	—	+
133	Khanpur	—	+	+	+
134	Chachrauli	—	—	—	+
135	Sharakpur	—	+	—	+
136	Sirhind	+	—	+	—
137	Dina Nagar	—	—	—	—
138	Rajanpur	+	—	—	+
139	Dera Bassi	—	—	—	+
140	Jalalabad	—	—	+	+
141	Ballabgarh	—	—	+	—
142	Buria	—	—	—	—
143	Karor	+	+	+	+
144	Alipur	+	+	+	—
145	Bakloh	—	+	+	+
146	Ahmedpur Lamma	—	—	+	—
147	Sambrial	—	—	+	+
148	Murree	+	—	+	—
149	Kasauli	+	+	+	—
150	Mithankot	+	—	—	+
151	Khangarh	—	—	+	+
152	Dalhousie	+	+	+	—
153	Loharu	—	+	—	+
154	Dagshai	—	—	—	—
155	Subathu	—	—	+	—
156	Sanawar	+	+	—	—
157	Attock	—	+	+	+
1	Delhi	+	+	+	+

SUBSIDIARY TABLE IX.

Rural Density. Census 1921.

District.	Places classed as towns in each of the last five censuses. Number.	Name.	Total area less revenue area of towns in column 3. (Square miles).	Population of tahsil. 1921.	Population of tahsil. 1911.	Urban population. 1921.	Urban population. 1911.	Rural population. 1921.	Rural population. 1911.	Number of rural population per square mile of rural area. 1921.	Number of rural population per square mile of rural area. 1911.
1	2	3	4	5	6	7	8	9	10	11	12
		PUNJAB (BRITISH TERRITORY) ..	90,757	20,685,024	19,578,573	2,044,182	1,891,961	18,640,842	17,686,612	205	195
1. HISSAR.		Hissar Tahsil ..	798	136,272	126,808	21,415	17,162	114,857	109,646	144	137
	1	Hissar ..	..	..	..	21,415	17,162	..	..	..	..
		Hansi Tahsil ..	774	177,043	167,963	15,425	14,576	161,618	153,387	209	198
	2	Hansi ..	..	..	..	15,425	14,576	..	..	..	..
		Bhiwani Tahsil ..	739	126,015	119,081	33,270	31,100	92,745	87,981	126	119
	3	Bhiwani ..	..	..	..	33,270	31,100	..	..	..	..
		Fatehabad Tahsil ..	1,177	195,801	199,934	..	..	195,801	199,934	166	170
		Sirsa Tahsil ..	1,636	181,679	191,103	16,241	14,629	165,438	176,474	101	108
	4	Sirsa ..	..	..	..	16,241	14,629	..	..	..	..
2. ROHTAK.		Rohtak Tahsil ..	505	200,939	178,350	25,240	20,361	175,699	157,989	348	313
	5	Rohtak ..	..	..	..	25,240	20,361	..	..	..	..
		Jhajjar Tahsil ..	700	213,866	202,028	24,209	23,405	189,657	178,623	271	255
	6	Jhajjar ..	..	..	..	10,800	10,617	..	..	..	..
	7	Bahadurgarh ..	..	..	..	5,955	4,990	..	..	..	..
	8	Beri ..	..	..	..	7,454	7,798	..	..	..	..
		Gohana Tahsil ..	542	175,291	161,111	5,107	5,438	170,184	155,673	314	287
	9	Gohana ..	..	..	..	5,107	5,438	..	..	..	..
		Sonepat Tahsil ..	441	182,176	173,345	12,981	12,014	169,195	161,331	384	366
	10	Sonepat ..	..	..	..	12,981	12,014	..	..	..	..
3. GURGAON.		Gurgaon Tahsil ..	395	111,980	112,312	9,865	10,599	102,115	101,713	259	258
	11	Gurgaon ..	..	..	..	5,107	5,461	..	..	..	..
	12	Sohna ..	..	..	..	4,758	5,138	..	..	..	..
		Ferozepur-Jhirka Tahsil ..	304	98,285	114,598	4,542	5,719	93,743	108,879	308	358
	13	Ferozepur-Jhirka ..	..	..	..	4,542	5,719	..	..	..	..
		Nuh Tahsil ..	401	112,119	128,599	..	..	112,119	128,599	280	321
		Palwal Tahsil ..	356	131,760	136,572	15,206	14,953	116,554	121,619	327	342
	14	Palwal ..	..	..	..	9,352	9,485	..	..	..	..
	15	Hodal ..	..	..	..	5,854	5,468	..	..	..	..
		Rewari Tahsil ..	416	147,256	151,096	23,129	24,780	124,127	126,316	298	304
	16	Rewari ..	..	..	..	23,129	24,780	..	..	..	..
		Ballabgarh Tahsil ..	280	80,603	86,650	8,058	8,540	72,545	78,110	259	279
	17	Ballabgarh ..	..	..	..	3,721	4,053	..	..	..	..
	18	Faridabad ..	..	..	..	4,337	4,487	..	..	..	..
4. KARNAL.		Karnal Tahsil ..	840	232,607	226,739	22,845	21,961	209,762	204,778	250	244
	19	Karnal ..	..	..	..	22,845	21,961	..	..	..	..
		Panipat Tahsil ..	445	173,796	171,579	27,343	26,342	146,453	145,237	329	326
	20	Panipat ..	..	..	..	27,343	26,342	..	..	..	..
		Kaithal Tahsil ..	1,246	275,722	250,917	15,477	12,912	260,245	238,005	209	191
	21	Kaithal ..	..	..	..	15,477	12,912	..	..	..	..
		Thanesar Tahsil ..	540	146,601	151,778	15,555	15,773	131,046	136,005	243	252
	22	Thanesar ..	..	..	..	4,226	4,719	..	..	..	..
	23	Shahabad ..	..	..	..	11,329	11,054	..	..	..	..
5. AMBALA.		Ambala Tahsil ..	352	187,926	195,385	76,326	80,131	111,600	115,254	317	327
	24	Ambala ..	..	..	..	76,326	80,131	..	..	..	..
		Kharar Tahsil ..	372	142,894	134,167	4,111	4,078	138,783	130,089	373	350
	25	Sanawar ..	..	..	..	899	884	..	..	..	..
	26	Kasauli ..	..	..	..	3,212	3,194	..	..	..	..
		Jagadhri Tahsil ..	403	126,704	140,299	15,118	16,317	111,586	123,982	277	308
	27	Jagadhri ..	..	..	..	11,544	12,045	..	..	..	..
	28	Buria ..	..	..	..	3,574	4,272	..	..	..	..
		Naraingarh Tahsil ..	436	107,798	112,447	7,630	7,774	100,168	104,673	230	240
	29	Sadhaura ..	..	..	..	7,630	7,774	..	..	..	..
		Rupar Tahsil ..	286	116,155	108,556	7,606	6,935	108,549	101,621	380	355
	30	Rupar ..	...	..	..	7,606	6,935	..	..	..	..
6. SIMLA.		Simla Tahsil ..	42	35,003	27,593	30,820	23,284	4,183	4,309	100	103
	31	Simla ..	..	..	..	27,494	19,405	..	..	..	..
	32	Dagshai ..	..	..	..	1,745	2,032	..	..	..	..
	33	Subathu ..	..	..	..	1,581	1,847	..	..	..	..
		Kot Khai Tahsil ..	32	10,324	10,843	..	..	10,324	10,843	323	339
7. KANGRA.		Kangra Tahsil ..	417	118,374	119,628	4,904	6,923	113,470	112,705	272	270
	34	Dharmsala ..	..	..	..	4,904	6,923	..	..	..	..
		Dehra Tahsil ..	495	124,638	126,525	..	..	124,638	126,525	252	256
		Nurpur Tahsil ..	519	95,470	100,041	..	..	95,470	100,041	184	193
		Hamirpur Tahsil ..	590	168,504	166,701	..	..	168,504	166,701	286	283
		Palampur Tahsil ..	523	137,052	132,688	..	..	137,052	132,688	262	254
		Kulu Tahsil ..	1,335	122,027	124,803	..	..	122,027	124,803	91	93

SUBSIDIARY TABLE IX.

Rural Density. Census 1921.

District.	Places classed as towns in each of the last five censuses.		Total area less revenue area of towns in column 3. (Square miles).	Population of tahsil.		Urban population.		Rural population.		Number of rural population per square mile of rural area.	
	Number.	Name.		1921.	1911.	1921.	1911.	1921.	1911.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12
8. HOSHIARPUR.		Hoshiarpur Tahsil ..	504	247,196	241,033	26,490	22,844	220,706	218,189	438	433
	35	Hoshiarpur ..	..	..	..	21,285	17,449	..	..	..	..
	36	Hariana ..	..	..	..	5,205	5,395	..	..	..	..
		Dasuya Tahsil ..	500	215,600	208,865	8,362	7,016	207,238	201,849	414	404
	37	Urmar Tanda ..	..	..	..	8,362	7,016	..	..	..	..
		Garhshankar Tahsil ..	511	232,772	236,814	..	..	232,772	236,814	456	463
		Una Tahsil ..	690	231,851	231,857	..	..	231,851	231,857	336	336
9. JULLUNDUR.		Jullundur Tahsil ..	360	289,396	278,101	79,520	77,949	209,876	200,152	583	556
	38	Jullundur ..	..	..	..	71,008	69,318	..	..	..	..
	39	Kartarpur ..	..	..	..	8,512	8,631	..	..	..	..
		Nawashahr Tahsil ..	284	177,692	170,738	16,352	15,369	161,340	155,369	568	547
	40	Rahon ..	..	..	..	5,947	6,292	..	..	..	..
	41	Banga ..	..	..	..	5,089	4,602	..	..	..	..
	42	Nawashahr ..	..	..	..	5,316	4,475	..	..	..	..
		Phillaur Tahsil ..	284	164,806	163,248	11,541	12,402	153,265	150,846	540	531
	43	Phillaur ..	..	..	..	4,696	5,224	..	..	..	..
	44	Nurmahal ..	..	..	..	6,845	7,178	..	..	..	..
		Nakodar Tahsil ..	356	190,650	189,833	9,434	8,859	181,216	180,974	509	508
	45	Nakodar ..	..	..	..	9,434	8,859	..	..	..	..
10. LUDHIANA.		Ludhiana Tahsil ..	674	285,953	258,367	51,880	44,170	234,073	214,197	347	318
	46	Ludhiana ..	..	..	..	51,880	44,170	..	..	..	..
		Jagraon Tahsil ..	385	164,553	146,659	26,110	22,549	138,443	124,110	360	322
	47	Jagraon ..	..	..	..	17,731	15,039	..	..	..	..
	48	Raikot ..	..	..	..	8,379	7,510	..	..	..	..
		Samrala Tahsil ..	290	117,116	112,166	..	..	117,116	112,166	404	387
11. FEROZEPORE.		Ferozepore Tahsil ..	664	221,737	204,285	54,351	50,836	167,386	153,449	252	231
	49	Ferozepore ..	..	..	..	54,351	50,836	..	..	..	..
		Zira Tahsil ..	480	166,373	155,695	10,582	10,237	155,791	145,458	325	303
	50	Zira ..	..	..	..	4,622	4,378	..	..	..	..
	51	Dharmkot ..	..	..	..	5,960	5,859	..	..	..	..
		Moga Tahsil ..	625	209,558	190,703	..	..	209,558	190,703	335	305
		Muktsar Tahsil ..	908	209,645	180,046	14,372	13,930	195,273	166,116	215	183
	52	Muktsar ..	..	..	..	10,539	8,834	..	..	..	..
	53	Jalalabad ..	..	..	..	3,833	5,096	..	..	..	..
		Fazilka Tahsil	1,319	290,935	228,928	22,745	20,477	268,190	208,451	203	158
	54	Fazilka ..	..	..	..	13,829	10,985	..	..	..	..
	55	Abohar ..	..	..	..	8,916	9,492	..	..	..	..
12. LAHORE.		Lahore Tahsil ..	620	515,613	437,579	281,781	228,687	233,832	208,892	377	337
	56	Lahore ..	..	..	..	281,781	228,687	..	..	..	..
		Chunian Tahsil ..	1,107	295,509	274,021	7,642	7,151	287,867	266,870	260	241
	57	Chunian ..	..	..	..	7,642	7,151	..	...	..	..
		Kasur Tahsil ..	785	320,214	289,255	47,609	38,502	272,605	250,753	347	319
	58	Kasur ..	..	..	..	31,018	24,783	..	..	..	..
	59	Khem Karan ..	..	..	..	6,152	5,732	..	..	..	..
	60	Patti ..	..	..	..	10,439	7,987	..	..	..	..
13. AMRITSAR.		Amritsar Tahsil ..	527	450,760	425,304	173,346	164,938	277,414	260,366	526	494
	61	Amritsar ..	..	..	..	160,218	152,756	..	..	..	..
	62	Majitha ..	..	..	..	5,664	5,223	..	..	..	..
	63	Jandiala ..	..	..	..	7,464	6,959	..	..	..	..
		Tarn Taran Tahsil ..	596	294,465	271,970	5,988	4,260	288,477	267,710	484	449
	64	Tarn Taran ..	..	..	..	5,988	4,260	..	..	..	..
		Ajnala Tahsil ..	417	184,149	183,522	..	..	184,149	183,522	442	440
14. GURDASPUR.		Gurdaspur Tahsil ..	494	234,146	224,515	12,953	10,402	221,193	214,113	448	433
	65	Gurdaspur ..	..	..	..	8,906	6,248	..	..	..	..
	66	Dina Nagar ..	..	..	..	4,047	4,154	..	..	..	..
		Batala Tahsil ..	467	275,695	269,706	30,455	30,086	245,240	238,720	525	511
	67	Batala ..	..	..	..	26,122	26,430	..	..	..	..
	68	Dera Baba Nanak ..	..	..	..	4,333	4,556	..	..	..	..
		Pathankot Tahsil ..	359	129,502	132,103	17,944	17,667	111,558	114,436	311	319
	69	Pathankot ..	..	..	..	7,353	7,007	..	..	..	..
	70	Dalhousie ..	..	..	..	2,405	1,582	..	..	..	..
	71	Bakloh ..	..	..	..	3,430	3,566	..	..	..	..
	72	Sujanpur ..	..	..	..	4,756	5,512	..	..	..	..
		Shakargarh Tahsil ..	486	212,849	210,447	..	..	212,849	210,447	438	433

SUBSIDIARY TABLE IX.

Rural Density. Census 1921.

District.	Places classed as towns in each of the last five censuses.		Total area less revenue area of towns in column 3. (Square miles).	Population of tahsil.		Urban population.		Rural population.		Number of rural population per square mile of rural area.	
	Number.	Name.		1921.	1911.	1921.	1911.	1921.	1911.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12
15. SIALKOT.		Sialkot Tahsil ..	416	290,469	283,489	70,619	64,869	219,850	218,620	528	526
	73	Sialkot ..	..	..	..	70,619	64,869	..	..	..	..
		Pasrur Tahsil ..	282	140,788	148,758	6,909	7,564	133,879	141,194	475	501
	74	Pasrur ..	..	..	..	6,909	7,564	..	..	..	..
		Zafarwal Tahsil ..	307	158,936	156,930	..	..	158,936	156,930	518	511
		Raya Tahsil ..	*484*	*196,936*	*194,207*	..	..	*196,936*	*194,207*	407	401
		Daska Tahsil ..	276	150,694	147,797	9,607	12,331	141,087	135,466	511	491
	75	Sambrial ..	..	..	..	3,324	6,285	..	..	..	..
	76	Hardo Daska ..	..	..	..	6,283	6,046	..	..	..	..
16. GUJRANWALA.		Gujranwala Tahsil ..	926	294,567	266,656	43,703	35,833	250,864	230,823	271	249
	77	Gujranwala ..	..	..	..	37,887	30,307	..	..	..	..
	78	Eminabad ..	..	..	..	5,816	5,526	..	..	..	..
		Wazirabad Tahsil ..	440	146,248	148,998	23,277	22,402	122,971	126,596	279	288
	79	Wazirabad ..	..	..	..	18,645	17,146	..	..	..	..
	80	Ramnagar ..	..	..	..	4,632	5,256	..	..	..	..
		Hafizabad Tahsil ..	908	182,766	189,928	..	..	182,766	189,928	201	209
17. SHEIKHUPURA.		Khangah Dogran Tahsil ..	880	267,674	222,535	..	..	267,674	222,535	304	253
		Sharakpur Tahsil ..	1,022	255,461	213,928	4,127	4,482	251,334	209,446	246	205
	81	Sharakpur ..	..	..	..	4,127	4,482	..	..	..	..
18. GUJRAT.		Gujrat Tahsil ..	557	295,551	304,778	40,006	37,795	255,545	266,983	459	479
	82	Gujrat ..	..	..	..	21,974	19,090	..	..	..	..
	83	Kunjah ..	..	..	..	7,240	7,090	..	..	..	..
	84	Jalalpur Jattan ..	..	..	..	10,792	11,615	..	..	..	..
		Kharian Tahsil ..	664	250,201	265,268	6,014	5,351	244,187	259,917	368	391
	85	Dinga ..	..	..	..	6,014	5,351	..	..	..	..
		Phalia Tahsil ..	1,037	278,294	217,953	..	..	278,294	217,953	268	210
19. SHAHPUR.		Shahpur Tahsil ..	598	137,899	141,683	6,582	7,658	131,317	134,025	220	224
	86	Sahiwal ..	..	..	..	6,582	7,658	..	..	..	..
		Khushab Tahsil ..	2,519	168,718	175,824	10,009	10,159	158,709	165,665	63	66
	87	Khushab ..	..	..	..	10,009	10,159	..	..	..	..
		Bhalwal Tahsil ..	816	220,951	184,726	22,992	21,021	197,959	163,705	243	201
	88	Bhera ..	..	..	..	17,027	15,202	..	..	..	..
	89	Miani ..	..	..	..	5,965	5,819	..	..	..	..
		Sargodha Tahsil ..	834	192,350	142,768	..	..	192,350	142,768	231	171
20. JHELUM.		Jhelum Tahsil ..	885	173,122	180,034	18,060	19,678	155,062	160,356	175	181
	90	Jhelum ..	..	..	..	18,060	19,678	..	..	..	..
		Pind Dadan Khan Tahsil ..	848	143,338	156,305	9,919	10,590	133,419	145,715	157	172
	91	Pind Dadan Khan ..	..	..	..	9,919	10,590	..	..	..	..
		Chakwal Tahsil ..	997	160,608	175,236	7,425	6,400	153,183	168,836	154	169
	92	Chakwal ..	..	..	..	7,425	6,400	..	..	..	..
21. RAWALPINDI.		Rawalpindi Tahsil ..	761	262,656	249,833	101,142	86,483	161,514	163,350	212	215
	93	Rawalpindi ..	..	..	..	101,142	86,483	..	..	..	..
		Gujar Khan Tahsil ..	569	148,837	148,575	..	..	148,837	148,575	262	261
		Murree Tahsil ..	246	60,969	56,570	3,292	1,705	57,677	54,865	234	223
	94	Murree ..	..	..	..	3,292	1,705	..	..	..	..
		Kahuta Tahsil ..	453	96,762	92,849	..	..	96,762	92,849	214	205
22. ATTOCK.		Attock Tahsil ..	646	173,472	161,351	18,428	14,602	155,044	146,749	240	227
	95	Hazro ..	..	..	..	8,408	9,950	..	..	..	..
	96	Campbellpur ..	..	..	..	9,850	4,022	..	..	..	..
	97	Attock ..	..	..	..	170	630	..	..	..	..
		Pindi Gheb Tahsil ..	1,486	120,097	126,300	9,419	9,045	110,678	117,255	74	79
	98	Pindi Gheb ..	..	..	..	9,419	9,045	..	..	..	..
		Talagang Tahsil ..	1,187	108,501	115,418	6,438	6,746	102,063	108,672	86	92
	99	Talagang ..	..	..	..	6,438	6,746	..	..	..	..
		Fatehjang Tahsil ..	863	110,179	116,204	..	..	110,179	116,204	128	135
23. MIANWALI.		*Mianwali Tahsil* ..	1,525	147,553	138,380	9,115	7,064	138,438	131,316	91	86
	100	Mianwali ..	..	..	..	9,115	7,064	..	..	..	..
		Bhakkar Tahsil ..	3,122	147,121	135,127	6,193	5,388	140,928	129,739	45	42
	101	Bhakkar ..	..	..	..	6,193	5,388	..	..	..	..
		Isa Khel Tahsil ..	699	63,531	67,870	14,627	13,522	48,904	54,348	70	78
	102	Isa Khel ..	..	..	..	6,172	6,868	..	..	..	..
	103	Kalabagh ..	..	..	..	8,455	6,654	..	..	..	..

SUBSIDIARY TABLE IX.

Rural Density. Census 1921.

District.	Places classed as towns in each of the last five censuses.		Total area less revenue area of towns in column 3. (Square miles).	Population of tahsil.		Urban population.		Rural population.		Number of rural population per square mile of rural area.	
	Number	Name.		1921.	1911.	1921.	1911.	1921.	1911.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12
24. MONTGOMERY.		Montgomery Tahsil	1,543	222,675	90,635	23,517	16,366	199,158	74,269	129	48
	104	Montgomery	..	..	..	14,601	8,129	..	..	..	..
	105	Kamalia	..	..	..	8,916	8,237	..	..	..	..
		Okara Tahsil	719	148,716	67,144	..	..	148,716	67,144	207	93
		Dipalpur Tahsil	995	200,978	197,310	..	..	200,978	197,310	202	198
		Pakpattan Tahsil	1,339	141,417	146,421	7,218	7,912	134,199	138,509	100	103
	106	Pakpattan	..	..	..	7,218	7,912	..	..	..	..
25. LYALLPUR.		Lyallpur Tahsil	919	344,852	310,916	..	..	344,852	310,916	363	328
		Samundri Tahsil	761	224,806	197,796	..	..	224,806	197,796	295	260
		Toba Tek Singh Tahsil	899	232,426	193,357	..	..	232,426	193,357	259	215
		Jaranwala Tahsil	708	177,379	145,793	..	..	177,379	145,793	251	206
26. JHANG.		Jhang Tahsil	1,350	232,570	216,628	30,139	25,914	202,431	190,714	150	141
	107	Jhang-Maghiana	..	..	..	30,139	25,914	..	..	..	..
		Chiniot Tahsil	1,007	211,188	183,966	17,513	14,085	193,675	169,881	192	169
	108	Chiniot	..	..	..	17,513	14,085	..	..	..	..
		Shorkot Tahsil	1,005	126,801	124,209	..	..	126,801	124,209	126	124
27. MULTAN.		Multan Tahsil	832	243,385	260,397	84,806	99,243	158,579	161,154	191	194
	109	Multan	..	..	..	84,806	99,243	..	..	..	..
		Shujabad Tahsil	681	132,091	134,418	6,730	6,334	125,361	128,084	184	188
	110	Shujabad	..	..	..	6,730	6,334	..	..	..	..
		Lodhran Tahsil	1,056	125,353	127,776	..	..	125,353	127,776	119	121
		Mailsi Tahsil	1,430	113,927	120,549	..	..	113,927	120,549	80	84
		Khanewal Tahsil	892	127,131	26,392	..	..	127,131	26,392	143	30
		Kabirwala Tahsil	861	148,377	144,681	..	..	148,377	144,681	172	168
28. MUZAFFARGARH.		Muzaffargarh Tahsil	911	178,579	187,064	8,570	7,736	170,009	179,328	187	197
	111	Muzaffargarh	..	..	..	5,386	4,387	..	..	..	..
	112	Khangarh	..	..	..	3,184	3,349	..	..	..	..
		Alipur Tahsil	925	146,711	146,135	3,434	3,312	143,277	142,823	155	154
	113	Alipur	..	..	..	3,434	3,312	..	..	..	..
		Sanawan Tahsil	1,321	108,970	107,671	..	..	108,970	107,671	82	82
		Leiah Tahsil	2,413	134,218	128,591	12,015	11,676	122,203	116,915	51	48
	114	Leiah	..	..	..	8,476	8,173	..	..	..	..
	1 5	Karor	..	..	..	3,539	3,503	..	..	..	..
29. DERA GHAZI KHAN.		Dera Ghazi Khan Tahsil	1,506	193,789	182,894	20,731	18,466	173,058	164,428	115	109
	116	Dera Ghazi Khan	..	..	..	20,731	18,466	..	..	..	..
		Sanghar Tahsil	1,049	84,759	106,640	5,103	5,965	79,656	100,675	76	96
	117	Taunsa	..	..	..	5,103	5,965	..	..	..	..
		Rajanpur Tahsil	1,930	105,008	106,911	11,531	15,917	93,477	90,994	48	47
	118	Rajanpur	..	..	..	3,964	3,704	..	..	..	..
	119	Mithankot	..	..	..	3,204	2,589	..	..	..	..
	120	Rojhan	..	..	..	4,363	9,624	..	..	..	..
		Jampur Tahsil	827	85,496	103,415	13,092	13,410	72,404	90,005	88	109
	121	Jampur	..	..	..	7,317	6,517	..	..	..	..
	122	Dajal	..	..	..	5,775	6,893	..	..	..	..
		Biloch Trans-Frontier	2,566	26,758	28,587	..	..	26,758	28,587	10	11
DELHI.		Delhi Tahsil	510	488,188	413,447	304,420	232,837	183,768	180,610	360	354
	1	Delhi	..	..	..	304,420	232,837	..	..	..	..

SUBSIDIARY TABLE X.

Statement showing average population and area per Village in Tahsil. Census 1921.

District.	Tahsil.	Number of villages.	Rural. Population.	Rural. Area (in square miles).	Average. Number of persons per village.	Average. Area per village (in square miles).
1	2	3	4	5	6	7
	PUNJAB (BRITISH TERRITORY) ..	34,119	18,640,842	90,757	546	2·7
HISSAR.	Hissar ..	135	114,857	798	851	5·9
	Hansi ..	131	161,618	774	1,234	5·9
	Bhiwani ..	130	92,745	739	713	5·7
	Fatehabad ..	259	195,801	1,177	756	4·5
	Sirsa ..	306	165,438	1,636	541	5·3
ROHTAK.	Rohtak ..	125	175,699	505	1,406	4·0
	Jhajjar ..	254	189,657	700	747	2·8
	Gohana ..	117	170,184	542	1,455	4·6
	Sonepat ..	226	169,195	441	749	2·0
GURGAON.	Gurgaon ..	211	102,115	395	484	1·9
	Ferozepur-Jhirka ..	230	93,743	304	408	1·3
	Nuh ..	260	112,119	401	431	1·5
	Palwal ..	187	116,554	356	623	1·9
	Rewari ..	288	124,127	416	431	1·4
	Ballabgarh ..	173	72,545	280	419	1·6
KARNAL.	Karnal ..	386	209,762	840	543	2·2
	Panipat ..	173	146,453	445	847	2·6
	Kaithal ..	412	260,245	1,246	632	3·0
	Thanesar ..	419	131,046	540	313	1·3
AMBALA.	Ambala ..	291	111,600	352	384	1·2
	Kharar ..	370	138,783	372	375	1·0
	Jagadhri ..	373	111,586	403	299	1·1
	Naraingarh ..	318	100,168	436	315	1·4
	Rupar ..	360	108,549	286	302	0·8
SIMLA.	Simla ..	95	4,183	42	44	0·4
	Kot Khai ..	111	10,324	32	93	0·3
KANGRA.	Kangra ..	133	113,470	417	853	3·1
	Dehra ..	145	124,638	495	860	3·4
	Nurpur ..	191	95,470	519	500	2·7
	Hamirpur ..	64	168,504	590	2,633	9·2
	Palampur ..	113	137,052	523	1,213	4·6
	Kulu ..	67	122,027	1,335	1,821	19·9
HOSHIARPUR.	Hoshiarpur	485	220,706	504	455	1·0
	Dasuya ..	632	207,238	500	328	0·8
	Garhshankar ..	477	232,772	511	488	1·1
	Una ..	524	231,851	690	442	1·3
JULLUNDUR.	Jullundur ..	405	209,876	360	518	0·9
	Nawashahr ..	276	161,340	284	585	1·0
	Phillaur ..	221	153,265	284	694	1·3
	Nakodar ..	319	181,216	356	568	1·1
LUDHIANA.	Ludhiana ..	432	234,073	674	542	1·6
	Jagraon ..	167	138,443	385	829	2·3
	Samrala ..	260	117,116	290	450	1·1
FEROZEPORE.	Ferozepore ..	361	167,386	664	464	1·8
	Zira ..	338	155,791	480	461	1·4
	Moga ..	166	209,558	625	1,262	3·8
	Muktsar ..	319	195,273	908	612	2·8
	Fazilka ..	315	268,190	1,319	851	4·2
LAHORE.	Lahore ..	321	233,832	620	728	1·9
	Chunian ..	467	287,867	1,107	616	2·4
	Kasur ..	335	272,605	785	814	2·3
AMRITSAR.	Amritsar ..	368	277,414	527	754	1·4
	Tarn Taran ..	340	288,477	596	848	1·8
	Ajnala ..	328	184,149	417	561	1·3
GURDASPUR.	Gurdaspur ..	661	221,193	494	335	0·7
	Batala ..	480	245,240	467	511	1·0
	Pathankot ..	400	111,658	359	279	0·9
	Shakargarh ..	702	212,849	486	303	0·7
SIALKOT.	Sialkot ..	642	219,850	416	342	0·6
	Pasrur ..	376	133,879	282	356	0·7
	Zafarwal ..	483	158,936	307	329	0·6
	Raya ..	452	196,936	484	436	1·1
	Daska ..	256	141,087	276	551	1·1
GUJRANWALA.	Gujranwala ..	564	250,864	926	445	1·6
	Wazirabad ..	252	122,971	440	488	1·7
	Hafizabad ..	400	182,766	908	457	2·3
SHEIKHUPURA.	Khangah Dogran ..	253	267,674	880	1,058	3·5
	Sharakpur ..	660	251,334	1,022	381	1·5
GUJRAT.	Gujrat ..	508	255,545	557	503	1·1
	Kharian ..	508	244,187	664	481	1·3
	Phalia ..	420	278,294	1,037	663	2·5
SHAHPUR.	Shahpur ..	251	131,317	598	523	2·4
	Khushab ..	171	158,709	2,519	928	14·7
	Bhalwal ..	276	197,959	816	717	3·0
	Sargodha ..	283	192,350	834	680	2·9
JHELUM.	Jhelum ..	431	155,062	885	360	2·1
	Pind Dadan Khan ...	209	133,419	848	638	4·1
	Chakwal ..	247	153,183	997	620	4·0
RAWALPINDI.	Rawalpindi ..	448	161,514	761	361	1·7
	Gujar Khan ..	379	148,837	569	393	1·5
	Murree ..	104	57,677	246	555	2·4
	Kahuta ..	239	96,762	453	405	1·9
ATTOCK.	Attock ..	195	155,044	646	795	3·3
	Pindi Gheb ..	134	110,678	1,486	826	11·1
	Talagang ..	87	102,063	1,187	1,173	13·6
	Fatehjang ..	200	110,179	863	551	4·3
MIANWALI.	Mianwali ..	113	138,438	1,525	1,225	13·5
	Bhakkar ..	203	140,928	3,122	694	15·4
	Isa Khel ..	59	48,904	699	829	11·8
MONTGOMERY.	Montgomery ..	595	199,158	1,543	335	2·6
	Okara ..	347	148,716	719	429	2·1
	Dipalpur ..	473	200,978	995	425	2·1
	Pakpattan ..	420	134,199	1,339	320	3·2
LYALLPUR.	Lyallpur ..	322	344,852	949	1,071	2·9
	Samundri ..	287	224,806	761	783	2·7
	Toba Tek Singh ..	320	232,426	899	726	2·8
	Jaranwala ..	203	177,379	708	874	3·5
JHANG.	Jhang ..	428	202,431	1,350	473	3·2
	Chiniot ..	352	193,675	1,007	550	2·9
	Shorkot ..	200	126,801	1,005	634	5·0
MULTAN.	Multan ..	282	158,579	832	562	3·0
	Shujabad ..	146	125,361	681	859	4·7
	Lodhran ..	261	125,353	1,056	480	4·0
	Mailsi ..	335	113,927	1,430	340	4·3
	Khanewal ..	361	127,131	892	324	2·5
	Kabirwala ..	262	148,377	861	566	3·3
MUZAFFARGARH.	Muzaffargarh ..	376	170,009	911	452	2·4
	Alipur ..	173	143,277	925	828	5·3
	Sanawan ..	143	108,970	1,321	762	9·2
	Leiah ..	158	122,203	2,413	773	15·3
DERA GHAZI KHAN.	Dera Ghazi Khan ..	235	173,058	1,506	736	6·4
	Sanghar ..	171	79,656	1,049	466	6·1
	Rajanpur ..	165	93,477	1,930	567	11·7
	Jampur ..	141	72,404	827	514	5·9
	Biloch Trans-Frontier	8	26,758	2,566	3,345	320·7
DELHI.	Delhi ..	314	183,768	510	585	1·6

SUBSIDIARY TABLE XI.

Statement showing average number of persons per house (in Tahsil or State). Census 1921.

District.	Tahsil. Number.	Tahsil. Name.	Number of occupied houses.	Population.	Average number of persons per house.
1	2	3	4	5	6
		PUNJAB	5,532,305	25,101,060	4·5
		BRITISH TERRITORY	4,550,537	20,685,024	4·5
1. HISSAR.	1	Hissar	28,433	136,272	4·8
	2	Hansi	37,345	177,043	4·7
	3	Bhiwani	25,312	126,015	5·0
	4	Fatehabad	39,854	195,801	4·9
	5	Sirsa	38,514	181,679	4·7
2. ROHTAK.	6	Rohtak	39,266	200,939	5·1
	7	Jhajjar	43,192	213,866	5·0
	8	Gohana	36,759	175,291	4·8
	9	Sonepat	39,171	182,176	4·7
3. GURGAON.	10	Gurgaon	24,620	111,980	4·5
	11	Ferozepur-Jhirka	23,003	98,285	4·3
	12	Nuh	25,634	112,119	4·4
	13	Palwal	30,765	131,760	4·3
	14	Rewari	32,035	147,256	4·6
	15	Ballabgarh	19,120	80,603	4·2
4. KARNAL.	16	Karnal	54,256	232,607	4·3
	17	Panipat	39,587	173,796	4·4
	18	Kaithal	61,078	275,722	4·5
	19	Thanesar	35,167	146,601	4·2
5. AMBALA.	20	Ambala	47,033	187,926	4·0
	21	Kharar	34,897	142,894	4·1
	22	Jagadhri	31,150	126,704	4·1
	23	Naraingarh	26,120	107,798	4·1
	24	Rupar	28,387	116,155	4·1
6. SIMLA.	25	Simla	8,505	35,003	4·1
	26	Kot Khai	2,144	10,324	4·8
7. KANGRA.	27	Kangra	26,923	118,374	4·4
	28	Dehra	29,827	124,638	4·2
	29	Nurpur	21,401	95,470	4·5
	30	Hamirpur	38,942	168,504	4·3
	31	Palampur	31,033	137,052	4·4
	32	Kulu	26,297	122,027	4·6
8. HOSHIARPUR.	33	Hoshiarpur	59,437	247,196	4·2
	34	Dasuya	50,924	215,600	4·2
	35	Garhshankar	58,808	232,772	4·0
	36	Una	56,891	231,851	4·1
9. JULLUNDUR.	37	Jullundur	66,681	289,396	4·3
	38	Nawashahr	42,129	177,692	4·2
	39	Phillaur	36,415	164,806	4·5
	40	Nakodar	42,949	190,650	4·4
10. LUDHIANA.	41	Ludhiana	66,212	285,953	4·3
	42	Jagraon	36,943	164,553	4·5
	43	Samrala	27,760	117,116	4·2
11. FEROZEPORE.	44	Ferozepore	49,325	221,737	4·5
	45	Zira	36,528	166,373	4·6
	46	Moga	46,113	209,558	4·5
	47	Muktsar	42,134	209,645	5·0
	48	Fazilka	53,686	290,935	5·4
12. LAHORE.	49	Lahore	109,214	515,613	4·7
	50	Chunian	62,915	295,509	4·7
	51	Kasur	69,721	320,214	4·6
13. AMRITSAR.	52	Amritsar	101,443	450,760	4·4
	53	Tarn Taran	64,780	294,465	4·5
	54	Ajnala	39,323	184,149	4·7
14. GURDASPUR.	55	Gurdaspur	49,998	234,146	4·7
	56	Batala	57,747	275,695	4·8
	57	Pathankot	29,608	129,502	4·4
	58	Shakargarh	45,605	212,849	4·7
15. SIALKOT.	59	Sialkot	59,233	290,469	4·9
	60	Pasrur	29,659	140,788	4·7
	61	Zafarwal	33,899	158,936	4·7
	62	Raya	41,131	196,936	4·8
	63	Daska	31,491	150,694	4·8
16. GUJRANWALA.	64	Gujranwala	63,834	294,567	4·6
	65	Wazirabad	32,261	146,218	4·5
	66	Hafizabad	39,498	182,766	4·6
17. SHEIKHUPURA.	67	Khangah Dogran	51,715	267,674	5·2
	68	Sharakpur	53,263	255,461	4·8
18. GUJRAT.	69	Gujrat	67,417	295,551	4·4
	70	Kharian	60,819	250,201	4·1
	71	Phalia	62,901	278,294	4·4
19. SHAHPUR.	72	Shahpur	33,546	137,899	4·1
	73	Khushab	41,263	168,718	4·1
	74	Bhalwal	49,171	220,951	4·5
	75	Sargodha	36,578	192,350	5·3
20. JHELUM.	76	Jhelum	43,667	173,122	4·0
	77	Pind Dadan Khan	38,514	143,338	3·7
	78	Chakwal	44,754	160,608	3·6
21. RAWALPINDI.	79	Rawalpindi	61,921	262,656	4·2
	80	Gujar Khan	38,520	148,837	3·9
	81	Murree	13,094	60,969	4·7
	82	Kahuta	23,344	96,762	4·1
22. ATTOCK.	83	Attock	39,970	173,472	4·3
	84	Pindigheb	30,404	120,097	4·0
	85	Talagang	27,931	108,501	3·9
	86	Fatehjang	27,742	110,179	4·0
23. MIANWALI.	87	Mianwali	33,659	147,553	4·4
	88	Bhakkar	33,199	147,121	4·4
	89	Isa Khel	14,237	63,531	4·5
24. MONTGOMERY.	90	Montgomery	45,094	222,675	4·9
	91	Okara	30,740	148,716	4·8
	92	Dipalpur	40,691	200,978	4·9
	93	Pakpattan	29,586	141,417	4·8

SUBSIDIARY TABLE XI.

Statement showing average number of persons per house (in Tahsil or State). Census 1921.

District.	Tahsil. Number.	Tahsil. Name.	Number of occupied houses.	Population	Average number of persons per house.
1	2	3	4	5	6
25. LYALLPUR.	94	Lyallpur	63,058	344,852	5·4
	95	Samundri	39,304	224,806	5·7
	96	Toba Tek Singh ..	42,570	232,426	5·5
	97	Jaranwala.. ..	32,827	177,379	5·4
26. JHANG.	98	Jhang	50,353	232,570	4·6
	99	Chiniot	43,033	211,188	4·9
	100	Shorkot	25,949	126,801	4·9
27. MULTAN.	101	Multan	53,411	243,385	4·6
	102	Shujabad	29,890	132,091	4·4
	103	Lodhran	28,080	125,353	4·5
	104	Mailsi	24,416	113,927	4·7
	105	Khanewal ..	27,109	127,131	4·7
	106	Kabirwala ..	30,654	148,377	4·8
28. MUZAFFARGARH.	107	Muzaffargarh ..	42,402	178,579	4·2
	108	Alipur	31,793	146,711	4·6
	109	Sanawan	23,603	108,970	4·6
	110	Leiah ..	29,008	134,218	4·6
29. D. G. KHAN.	111	Dera Ghazi Khan ..	41,491	193,789	4·7
	112	Sanghar	18,826	84,759	4·5
	113	Rajanpur	20,794	105,008	5·0
	114	Jampur	17,561	85,496	4·9
		Biloch-Trans Frontier Tract	..	26,758	..

District.	State. Number.	State. Name.	Number of occupied houses	Population	Average number of persons per house.
1	2	3	4	5	6
		PUNJAB STATES ..	981,768	4,416,036	4·5
		A.—HAVING POLITICAL RELATIONS WITH THE *PUNJAB GOVERNMENT*	*90,471*	*408,019*	4·5
	1	Dujana	5,207	25,833	5·0
	2	Pataudi	4,017	18,097	4·5
	3	Kalsia	13,330	57,371	4·3
	4	Simla Hill States ..	67,917	306,718	4·5
		B.—HAVING POLITICAL RELATIONS WITH THE GOVERNMENT OF INDIA	891,297	4,008,017	4·5
	5	Loharu	4,028	20,621	5·1
	6	Nahan	31,161	140,448	4·5
	7	Bilaspur	22,683	98,000	4·3
	8	Mandi	39,455	185,048	4·7
	9	Suket	11,435	54,328	4·8
	10	Kapurthala ..	65,491	284,275	4·3
	11	Malerkotla ..	30,096	80,322	2·7
	12	Faridkot	31,823	150,661	4·7
	13	Chamba	29,380	141,867	4·8
	14	Patiala	338,683	1,499,739	4·4
	15	Jind	62,580	308,183	4·9
	16	Nabha	55,164	263,334	4·8
	17	Bahawalpur ..	169,312	781,191	4·6
DELHI.	1	Delhi (Tahsil) ..	114,683	488,188	4·3

SUBSIDIARY

Results of Special City

Serial No.	City, Ward or Division.	Total number of buildings.	Number of inhabited buildings.	Number of buildings with: Ground floor only.	One upper floor.	Two upper floors.	Three upper floors.	Four upper floors.	Five upper floors.	Number of buil[dings with]: No inhabitant.	1—5 inhabitants.	6—10 inhabitants.	11—15 inhabitants.
	1	2	3	4	5	6	7	8	9	10	11	12	13
	LAHORE CITY	35,144	28,829	15,435	9,730	7,759	1,908	298	14	6,315	14,996	8,432	2,818
	LAHORE CITY (excluding Civil Station).	21,941	18,451	5,702	7,110	6,958	1,863	294	14	3,490	9,019	5,979	1,954
1	Ward No. 1	3,566	3,171	934	1,330	1,108	171	23	..	395	1,410	1,118	323
2	" " 2	7,258	6,058	1,215	2,059	2,936	920	122	6	1,200	3,046	2,078	602
3	" " 3	3,800	3,112	667	1,116	1,379	518	116	4	688	1,483	1,017	364
4	" " 4	3,261	2,590	1,160	1,155	798	135	12	1	671	1,384	736	257
5	" " 5	2,145	1,905	912	790	365	69	9	..	240	947	526	202
6	" " 6	1,911	1,615	814	660	372	50	12	3	296	749	504	206
	LAHORE CIVIL STATION ..	13,203	10,378	9,733	2,620	801	45	4	..	2,825	5,977	2,453	864
7	Ward No. 1	3,158	2,246	1,910	759	470	18	1	..	912	1,361	498	154
8	" " 2	1,628	1,343	1,068	395	152	13	..	..	285	763	311	114
9	" " 3	233	201	142	83	8	..	..	..	32	95	66	25
10	" " 4	1,782	1,398	1,631	130	18	2	1	..	384	827	286	100
11	" " 5	613	496	516	83	14	..	..	..	117	283	104	33
12	" " 6	604	508	425	169	9	1	..	..	96	348	80	32
13	" " 7	513	409	493	18	2	..	..	..	104	243	87	37
14	" " 8	909	704	768	119	19	3	..	..	205	430	129	53
15	" " 9	2,479	2,095	1,538	829	104	8	..	..	384	1,002	644	269
16	" " 10	324	264	316	7	1	..	..	..	60	188	43	10
17	" " 11	960	714	926	28	4	..	2	..	246	437	205	37
	AMRITSAR CITY	9,892	7,547	4,011	4,136	1,550	168	23	4	2,345	4,747	2,182	421
18	Ward No. 9	3,299	2,490	1,920	1,004	345	23	7	..	809	1,650	643	118
19	" " 10	3,655	2,948	982	1,864	723	70	13	3	707	1,911	885	118
20	" " 11	2,938	2,109	1,109	1,268	482	75	3	1	829	1,186	654	185
	JULLUNDUR CITY ..	4,712	3,639	2,632	1,599	445	33	2	1	1,073	2,381	850	291
21	Ward Rasta	2,756	2,202	1,721	879	141	13	1	1	554	1,517	516	125
22	Ward Mohindarwan	1,956	1,437	911	720	304	20	1	..	519	864	334	166
	RAWALPINDI CITY	3,896	3,270	2,546	1,121	212	13	8	1	626	1,941	858	286
23	Ward No. 1	967	800	605	320	37	2	2	1	167	405	228	109
24	" " 2	310	203	210	87	13	..	..	..	107	160	33	8
25	" " 3	66	35	33	30	3	..	..	..	31	17	8	3
26	" " 4	395	358	187	138	61	9	..	..	37	235	81	26
27	" " 5	645	564	428	195	22	..	..	..	81	302	185	43
28	" " 9	1,117	983	887	195	34	..	1	..	134	606	248	75
29	" " 10	396	327	196	156	42	2	..	..	69	216	75	22

TABLE XII.

Building Census held in February 1921.

…dings with					Number of buildings with							Number of buildings with an average per inhabited room of					
16—20 inhabitants.	21—30 inhabitants.	31—40 inhabitants.	41—50 inhabitants.	Over 50 inhabitants.	1 inhabited room.	2 inhabited rooms.	3 inhabited rooms.	4 inhabited rooms.	5 inhabited rooms.	6—20 inhabited rooms.	21—50 inhabited rooms.	2 persons or less than 2.	Between 2 and 3 persons.	Between 3 and 4 persons.	Between 4 and 5 persons.	More than 5 persons.	Serial No.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1,249	**706**	**220**	**150**	**258**	**11,015**	**7,762**	**3,798**	**2,384**	**1,225**	**2,371**	**274**	**14,310**	**5,300**	**3,471**	**2,101**	**3,647**	
817	**427**	**118**	**61**	**76**	**5,405**	**5,944**	**2,892**	**1,805**	**861**	**1,457**	**87**	**9,433**	**3,253**	**2,044**	**1,306**	**2,415**	
187	87	17	18	11	713	1,120	577	349	154	247	11	1,580	608	396	230	357	1
188	89	19	15	21	1,820	2,179	905	485	227	413	29	2,997	1,121	688	436	816	2
149	67	22	5	5	592	1,119	610	356	171	257	7	1,670	549	331	218	344	3
107	68	21	7	10	956	669	367	238	135	212	13	1,367	407	267	170	379	4
99	75	28	11	17	572	415	270	256	123	256	13	1,124	295	180	107	199	5
87	41	11	5	12	752	442	163	121	51	72	14	695	273	182	145	320	6
432	**279**	**102**	**89**	**182**	**5,610**	**1,818**	**906**	**579**	**364**	**914**	**187**	**4,877**	**2,047**	**1,427**	**795**	**1,232**	
86	61	18	26	42	1,237	438	199	103	50	178	41	1,112	377	291	151	315	7
56	43	16	20	20	658	227	113	88	64	165	28	685	260	166	95	137	8
7	5	3	..	..	94	50	26	17	9	5	..	94	56	35	10	6	9
47	35	17	18	68	849	183	104	61	38	125	38	515	312	230	136	205	10
34	22	7	4	9	256	82	27	35	18	58	20	299	67	55	33	42	11
15	14	15	4	..	281	105	36	26	10	40	10	266	106	69	29	38	12
19	10	3	6	4	230	59	23	18	19	50	10	199	80	46	36	48	13
39	27	8	3	15	399	79	45	25	31	101	24	417	105	74	26	82	14
16	46	5	4	9	843	501	299	193	112	138	9	933	491	323	176	172	15
3	7	5	..	8	222	8	4	5	6	17	2	115	58	39	19	33	16
10	9	5	4	7	541	86	30	8	7	37	5	242	135	99	84	154	17
120	**54**	**17**	**2**	**4**	**1,332**	**2,666**	**1,487**	**1,033**	**514**	**505**	**10**	**5,296**	**1,069**	**511**	**260**	**411**	
41	29	7	1	1	329	902	513	427	176	143	..	1,741	318	160	92	179	18
25	4	5	..	..	667	978	538	353	189	221	2	2,204	412	151	81	100	19
54	21	5	1	3	336	786	436	253	149	141	8	1,351	339	200	87	132	20
77	**30**	**5**	**4**	**1**	**1,607**	**1,124**	**395**	**189**	**94**	**225**	**5**	**2,332**	**693**	**334**	**126**	**154**	
23	15	1	4	1	1,026	2	194	92	62	83	3	1,342	450	193	93	124	21
54	15	4	..	..	581	382	201	97	32	142	2	990	243	141	33	30	22
129	**41**	**10**	**8**	**2**	**1,193**	**884**	**518**	**298**	**149**	**222**	**6**	**1,953**	**602**	**350**	**161**	**204**	
44	9	4	1	..	312	213	127	77	44	27	..	382	196	111	57	54	23
..	1	1	..	..	97	50	31	15	6	3	1	175	18	6	1	3	24
4	1	1	1	..	14	9	4	1	..	6	1	18	7	7	1	2	25
14	2	..	..	..	129	61	51	40	20	57	..	282	41	25	5	5	26
19	12	2	..	1	169	157	92	63	35	45	3	320	120	59	27	38	27
37	14	1	1	1	366	304	164	74	26	48	1	541	180	121	53	88	28
11	2	1	..	..	106	90	49	28	18	36	..	235	40	21	17	14	29

CHAPTER III.

Birth-Place.

63. Generalisation. 64. Immigration and Emigration Streams, Extra-Provincial. 65. Immigration and Emigration Streams, Intra-Provincial. 66. Traffic returns and the Intra-Provincial figures of birth-place. 67. Further analysis of Railway statistics, and their application to Census data of migration. 68. Traffic returns and Extra-Provincial figures of birth-place. 69. Some difficulties of interpretation. 70. Maya or Atman? 71. Graphic presentation of the data. 72. Comparison of the statistics with those of 1911. 73. Immigration from and Emigration to other countries. 74. Reference to tables.

Generalisation.

63. The present chapter with the title of "Birth-place" replaces the chapter on "Migration" of the Census Report of 1911. The new title is more appropriate than the old, in that it more accurately describes the actual entry in the Census Schedules, which defines the district of birth of each person enumerated. For every person, then, actually in the Punjab between sunset and sunrise on the 18th March 1921, we are able to state more or less correctly in which district he or she was born. The working assumption has already been adopted that the chance that a given person will be included in the Census Schedules is 0·99. The next question that arises is, what is the chance that a person having been entered in the Census Schedules, should have his or her district of birth correctly entered?

Now, of 20,685,024 persons enumerated in British Territory in the Punjab, 17,850,279 represented themselves as born in the districts in which they were enumerated: while in the Punjab States out of 4,416,036 persons enumerated, 3,730,163 persons are classed as having been born in the State in which they were enumerated. Thus 86 and 84 per cent. respectively of persons found in British Districts and Punjab States, affirmed that they were born in the self-same district or State in which they were enumerated; or, taking the Punjab as a whole 86 per cent. of the persons resident in British Districts and States, claimed to be born in the very district or State in which they were enumerated. It seems unlikely that there were many people who erroneously stated that they were born in a district or State other than that in which they were resident, whereas, there may have been many misstatements, in all good faith, by persons who, having come to reside in a district or State when quite young, were under the impression that they were born in that district or State. Further, sentiment in Indian village life is intensively conservative and the term "pardesi" (hailing from another country) is one that every immigrant is usually anxious to divest himself of. This may not be true of the Canal Colonies where the percentage of immigrants is very high, and where, so far, there exists no temptation for a man to class himself as one of the indigenous "Jangli" inhabitants; but it is certainly the case in the old-established districts of the Punjab; and it is probable that the number of persons residing on the 18th March 1921 in the districts in which they were born, was less rather than greater than the ascertained figure of 86 per cent. of the total population.

Then, again, there seem to be possibilities of misstatement in respect of the birth-places of married women, particularly of Hindu and Sikh married women, who are frequently introduced to their prospective husbands by middlemen, who may find it desirable to conceal a woman's antecedents. In the Central Punjab misrepresentations both of a woman's caste and birth-place have often been the subject of litigation, and the number of cases which appear in the courts must be but a small fraction of the cases in which the husband has been successfully deceived.

All the latter class of cases would involve false entries in respect of birth-place in the Census Schedules. Lastly, a small number of fugitives from justice, if enumerated at all, would be almost certain to give false replies to all the scheduled questions.

In consequence, it is not likely that we should be carrying caution too far in adjudging that the probability of an error in the recorded entry of birth-place is 1 in 100. If this figure is tentatively accepted, the chance that any one individual is recorded in the schedules, and has a correct entry in respect of place of

birth, will be 0·99 × 0·99=0·98 very nearly. Thus we may conclude that there is an average error of 2 per cent. (on the true numbers) in the numbers shown as born in any district or State.

64. Now it has been possible to give only a very general conclusion as to the accuracy of the Census figures in respect of place of birth, and as it is based on a variety of assumptions, it must be guardedly applied. *Immigration and Emigration Streams, Extra-Provincial.*

According to the Census figures the number of persons born in the Punjab and residing outside it, and the number of persons born outside the Punjab and residing in it, on March 18, 1921, were 549,386 and 627,137 respectively; while the corresponding figures for the 10th March 1911 were 516,612 and 660,219 respectively.

Now if we adopt the approximate assumptions made by Mr. Middleton in para. 25 of Chapter I, *viz.*—

(*i*) that the annual streams of immigration and emigration have been constant throughout the decade,

(*ii*) that the annual death-rate among immigrants and emigrants can be represented as a definite annual decrement of 20 *per mille*,

we find that the annual numbers of emigrants from, and immigrants into the Punjab during 1911-1921 were, in round numbers, 14,000 and 11,000 respectively. The figures arrived at above, exclude, however, the number of persons who may have left the Punjab and returned to it, or who may have entered the Punjab and left it during the decade. This omission, which no appeal to the Census figures can possibly rectify, may account for ten times as many emigrants from, and immigrants into, the Punjab each year, as the 25,000 persons who are calculated to cross the provincial boundary each year. As about 800,000 persons are born each year in the Punjab, of whom 45 per cent.* reach their 16th birthday, it may be said that 14,000 out of 360,000 adult persons, or, say just under 4 per cent., emigrate, in the restricted meaning of the word, which implies that they stay away from the Punjab long enough to affect the Census returns.

65. Using the same assumptions as those denoted (*i*) and (*ii*) in the above paragraph, the annual number of persons moving from one district to another, and staying long enough to affect the Census returns, has been calculated, and the results are tabulated in Subsidiary Table V to this Chapter. The table has been calculated from Mr. Middleton's formula, which can be most conveniently expressed in the following notation:— *Immigration and Emigration Streams, Intra-Provincial.*

Let (A→B) denote the number of persons born in district A, who moved annually between the years 1911 and 1921 into district B, and did not return prior to the 18th March 1921.

Let (A B) denote the number of persons born in district A and enumerated in District B in the Census year "*n*".

Then we have

$$(A \rightarrow B) = \frac{1}{45}\left[5\,(A\,B)_{1921} - 4\,(A\,B)_{1911}\right]$$

and, similarly,

$$(B \rightarrow A) = \frac{1}{45}\left[5\,(B\,A)_{1921} - 4\,(B\,A)_{1911}\right]$$

Now the application of the formula to the 812 possible reciprocal paths between the 29 districts of the Punjab, results, as will be seen in Subsidiary Table V, in no less than 225 negative values for the number of travellers annually of the type (A→B), between 2 districts. The most probable explanations of these negative values are, firstly, that a number of persons residing in 1911 in a district other than the one in which they were born, left the district before 1921, or that the death-rate among emigrants was greater than the assumed rate of 20 *per mille*. While recognising, therefore, that Mr. Middleton's formula is the outcome of a logical attempt to solve the very difficult problem of migration Kinematics from Census Statics, it does not seem to me to have succeeded, as the number of cases in which the formula breaks down, and gives a negative result, throws doubt on the numerical accuracy of the positive results. Having said so much in criticism, however, it is only fair to add that, qualitatively, the streams of intra-provincial emigration seem to be correctly indicated by Table V, and it may be taken to show the direction and relative strength of the inter-district

* This figure is adopted from Punjab Life Table P (Males) from the Actuarial Report on the Census of 1911, Vol 1, Part I of the India Report, page 187. The table for females was not constructed for the Punjab, but in Agra and Oudh (Table O) the percentage of females who reach 16 is 45 8, so the above figure is probably approximately correct.

currents of migration. What the absolute strength of the currents is can only be formed by direct observation, or by building up equations of far greater complexity than any which have been applied, at any rate, to Indian Census data.

As examples of the results of the inter-district migration which are consentaneous with one's independent belief as to the facts, one may instance the large annual currents which exist to and from the districts named in the margin. The districts named are those for which the calculated streams of population are greatest.

District to or from which the annual streams of migration are greatest.

From	Calculated persons leaving district each year.
Jullundur ..	6,837
Amritsar ..	5,545
Sialkot ..	5,514
Hoshiarpur ..	5,238
Gujranwala ..	4,909
Lahore ..	4,592
Gurdaspur ..	4,301
Lyallpur ..	4,179
To	**Calculated persons reaching district each year.**
Sheikhupura ..	21,690
Montgomery ..	10,242
Lyallpur ..	6,225
Lahore ..	4,776
Multan ..	3,652
Gujrat ..	3,072
Amritsar ..	2,357
Ferozepore ..	2,339

It will be observed that of the 8 districts which have the greatest annual number of persons arriving and leaving each year,* Lyallpur, Lahore and Amritsar appear in both categories, a fact which is in conformity with the greater volume of business transacted in these cities, and in the case of Lahore of its importance as the headquarters of Government, both of which facts involve lengthy periods of changes of residence. Excluding the newly formed district of Sheikhupura, the districts between which there has been the largest calculated migration are those noted in the margin.

Largest inter-district streams of migration.

From District.	To District.	Calculated annual changes of residence.
Jullundur ..	Montgomery ..	2,089
Lyallpur ..	Montgomery ..	1,487
Lahore ..	Montgomery ..	1,423
Amritsar ..	Lyallpur ..	1,282
Hissar ..	Ferozepore ..	1,258
Jullundur ..	Lyallpur ..	1,081
Jhang ..	Lyallpur ..	991
Hoshiarpur ..	Jullundur ..	896

Besides the clearly-marked population drift towards the Colony areas of Montgomery and Lyallpur, it is apparent that there are considerable movements of people from Hissar to Ferozepore, and from Hoshiarpur to Jullundur. As Jullundur herself is pouring out her population towards the colonies it is striking that her numbers should be so strongly reinforced from the neighbouring district of Hoshiarpur. †

Between many districts of the Punjab the streams of migration are of course, sluggish, or practically stationary. Thus, naturally, relatively very few persons go each year from the plains districts to the hills, the Musalman of the North-West does not readily migrate to the Hindu-populated areas of the South, whilst the Sikh, favourably situated in the Central Punjab, is too ardent of gain to journey often beyond his district except to the canal colonies, or to Australia and America. Thus from Lahore to Kangra, from Attock to Rohtak, and from Jullundur to Karnal or Mianwali, to mention only a few instances, the annual movement of persons is, so far as the Census returns go, practically negligible.

Traffic returns and the intra-provincial figures of birth-place.

66. So far we have dealt only with those movements of the population which reflect themselves in the Census statistics: but it is now necessary to emphasize what a small fraction of the total volume of circulation these census-reflected movements represent, and, how difficult is the interpretation of the census figures of birth-place.

As a rule in Census Reports the number of persons enumerated in Area B, having been born in Area A, are spoken of simply as the emigrants from Area A, or the immigrants into Area B. If this use were equivalent to definitions of the terms "emigrant" and "immigrant", no exception could be taken to the practice on logical grounds. It so happens, however, that the terms "emigrant" and "immigrant" have connotations which differ from the "birth-place" definition, and a good deal of confusion of thought arises in consequence. Thus Mr. Gait (Vol. I, Part I of the Census of India Report for 1911, pages 89 and 90) distinguishes five classes of migration, *viz.*, casual, temporary, periodic, semi-permanent, and permanent. In the last class alone, apparently, is there a change of domicile.

*It is necessary continually to remind the reader that these figures refer only to those emigrants and immigrants who affect the census returns, and that actually the number of persons going to and from the districts named is far in excess of the marginally noted figures.

† But the possibility of a large correction for "circulation" discussed in paragraph 67, has to be borne in mind.

The distinguishing characteristics of the various types of migration are clearly given, but nowhere is the important point explicitly stated that the census figures necessarily give only a partial measure of the volume of permanent and semi-permanent migration, and a wholly inadequate measure of the temporary and casual forms of migration.* This point, namely the extent to which all kinds of migrations are repeated in the Census figures of birth-place, must now be examined, though without any refinement of analysis.

To come down to bed-rock, it is clear that a full solution of the migration problem would involve a knowledge of every movement of every single human being from the place in which he or she was born, from birth till death. Clearly the census schedules do not give us this information, and this at once forces us from the physical to the statistical plane. What are the elements of a full statistical solution? The answer is that it involves a description of the frequency distribution of the number of persons who leave their homes for (*a*) all the possible varying lengths of time and (*b*) for all possible lengths of journeys.

Then the broad classifications could be sub-divided minutely according to age (both at departure and return), sex, religion, caste, and finally according to the objects of the migration; but, in the beginning, if we could get any idea of the number leaving their homes for a day, a week, a month, a year or several years, a step towards a grasp of the fundamental problem would have been made.

In the Punjab practically the only material we have for forming any conclusions as to the journeys made by persons in the Punjab, are contained in the traffic statistics of the North-Western Railway.

The figures for the total number of passengers carried of all classes, both ordinary and military, for the last decade are as shown in the margin. These figures are swollen by the large numbers of troops entrained during the war years from 1914-15 to 1917-18; but the traffic since the close of the war has exceeded anything obtaining before, so that by taking an average of the last 10 years, we shall not be exaggerating the present volume of passengers carried. The total mileage of the North-Western Railway system is (October 1922) 5,719 miles (5,308 broad-gauge and 411 narrow-gauge), out of which 2,072 miles lie in the North-West Frontier Province, Sindh, Baluchistan and the United Provinces: so that 3,647 miles of the North-Western Railway lie in the Punjab, to which must be added a few hundred miles of foreign lines also in the Punjab. We shall not, therefore, be far wrong in assuming that 2/3rd of the marginally noted numbers of passengers travelled in the Punjab. We may, therefore, conclude that in the decade 1911-1921, about 46,000,000 passengers travelled annually by rail in the Punjab. As the geometric mean of the populations of the Punjab and Delhi in 1911 (24,187,750) and 1921 (25,589,248) is 24,878,630 we may put the average number of railway journeys made in the Punjab each year as very nearly 2, for each man, woman and child.

Passengers carried by the North-Western Railway.

Year.	Total number of passengers (ordinary and military).
Calendar year 1911	53,559,788
„ „ 1912	54,047,738
Quarter ending 31st March 1913	14,043,893
1913-14 { Half year ending 30th September / „ „ „ 31st March }	61,349,543
1914-15 „ „ „ „ „	62,456,482
1915-16 „ „ „ „ „	66,899,142
1916-17 „ „ „ „ „	66,000,705
1917-18 „ „ „ „ „	56,832,990
1918-19 „ „ „ „ „	57,764,583
1919-20 „ „ „ „ „	58,059,030
1920-21 „ „ „ „ „	68,895,111
1921-22 „ „ „ „ „	73,790,248
Total	693,699,253

Now we have already estimated in paragraph 64 that the total number of persons travelling each year, and staying away from their birth-place long enough to affect the census returns is approximately 25,000 for extra—and 70,000 for intra-provincial migration, so that the journeys made by these persons are far too few sensibly to affect the 46 million journeys made each year in the Punjab, and our estimate of roughly 2 journeys per caput of population per annum may be provisionally accepted. As going and returning count as 2 journeys, on the average each person in the Punjab makes one trip away from his home each year.

*Whether the effect of periodic migration is reflected in the Census figures, of course depends on whether the Census tables place while the particular seasonal pilgrimage is in swing or not.

To this number must be added, if we are to determine the inter-district traffic, all the persons who travel by road, and subtracted all journeys made within the confines of a single district (we may tentatively assume the equality of these two numbers), leaving us still with one trip per annum of each individual in the Punjab and Delhi, from one district to another. This estimate of one trip per annum per person is based on the assumption that the whole population contributes to the 46 million journeys made annually. If, however, we were to exclude the stay-at-homes, that is the persons who do not go outside the limits of their district from one year's end to another's, who would probably form about one-third of the population, the trips per head of the travelling population would amount to $1\frac{1}{2}$, annually, instead of one.

The question now arises "can we form any estimate of the length of time that persons generally spend away from their native district?" A cultivator may leave his home in Jullundur and Hoshiarpur in early youth and settle, until he feels death approaching 50 years later, in one of the canal colonies, a Government servant may spend 30 years of his life in district after district other than the one in which he was born, a woman may live with her husband for the great part of her married life returning to her parents after 10, 15, 20 or more years, a student may spend 4 or 5 years in a University town, a merchant may leave his home for a few weeks to fix up a business deal, a marriage party may be away for a few days, and countless litigants will make a single day's journey to put in an appearance on behalf of a relation who has been "entangled" in a case in another district, or to prosecute their own suits on appeal.

As 14 persons out of 100 of the population of the Punjab were absent from their native districts at the time of the census, if we assume that the amount of travelling, and visiting, and settling being done at the census was normal, it follows that the average time spent away from his or her home district by each inhabitant of the Punjab is about 51 days. Since the average number of trips (to and fro journeys) is one per head of the total population, it appears that the average duration of each trip is practically 7 weeks, and the time spent outside the limits of the district by each member of the travelling public is (on the same assumption as before regarding the proportion of the stay-at-homes) is about $2\frac{3}{4}$ months in the year. This represents the total average time spent outside the district of birth on each journey completed either by return to the point of departure or by death.

We reach, therefore, the conclusion that while the 14 per cent. of persons enumerated in 1921 in Punjab Districts other than their district of birth, is made up of groups of persons, staying some a few days, some a few weeks, some a few months and some for a few or several years, the average duration of absence being $2\frac{3}{4}$ months for each trip abroad, we are quite unable to specify from the census figures, what proportion of this period is contributed by persons staying away from their home districts for short or long periods. In particular it appears to be unjustifiable to assume, as is commonly done, that the greater portion of the 14 per cent. of persons found in other than their native districts at the time of the census, is composed of long-term settlers. This being so the indiscriminate use of the expression "emigrant" or "immigrant" to the persons absent from their district of birth, at the moment of the census enumeration, is to be deprecated.*

Further analysis of Railway statistics, and their application to Census data of migration.

67. It is obvious that in general there will be an association between the distance to which a man departs from his birth-place and the time which he spends away. Thus a man might go to a neighbouring district for a few hours, but he is hardly likely to go from the Punjab to Assam, Burma or America for less than several months. On the other hand there must be many cases in which a woman only moves from one district to the adjoining one on marriage and then stays in her husband's house for the greater part of the rest of her life. As again the

*The basic idea which it has been sought to express, though simple, appears to have been neglected in Indian Census literature, so far as I have had access to it, and it will be well to express the argument in definite algebraic form. Let $n_x \delta x$ be the number of persons who stay away from their district of births for x to $(x+\delta x)$ days in the year. Then, the chance that one of these persons will be enumerated at the census in a district other than his own will be x/y where y is the number of days in the year, so that the total number of persons enumerated away from their homes will be $\int_0^y x n_x \, dx$. It is clear that nx is much greater for values of x less than 1 month, than it is for longer periods, and it is probable, therefore, that

$$\int_0^{3\text{ months}} x n_x \, dx > \int_{3\text{ months}}^{y} x n_x \, dx$$

Unless, therefore, we are prepared to apply the term "emigrant" to persons making visits of 3 months and under, it might be wrong to apply the term to more than a fraction of the crude figures obtained from the census of the numbers enumerated in places other than their native district.

longest migrations (in time) made by Punjabis will be mostly composed of colony settlers, so that the duration of a visit (using the phrase to cover all journeys whatsoever) will first increase, and then finally decrease with the distance. On this subject the Railway statistics afford us some precise information of a limited type.* Thus the statement below shows the average lead of 1st, 2nd, inter and 3rd class passengers on the North-Western Railway since 1911—

Period.		Average lead of passengers (ordinary and military).			
		I class.	II class.	Inter class.	III class.
		Miles.	Miles.	Miles.	Miles.
Half-year ending	30-6-1911	122·06	117·84	54·08	40·56
"	31-12-1911	90·60	101·59	46·38	41·00
"	30-6-1912	123·53	92·88	54·52	40·14
"	31-12-1912	131·40	103·16	53·43	39·34
Quarter ending	31-3-1913	130·10	112·27	53·27	40·58
Half year ending	30-9-1913	120·04	95·94	52·16	37·05
"	31-3-1914	136·07	117·16	53·94	39·47
"	30-9-1914	133·84	111·69	54·14	37·53
"	31-3-1915	150·50	150·31	53·62	40·43
"	30-9-1915	139·38	128·49	51·99	39·11
"	31-3-1916	153·90	132·35	53·77	41·38
"	30-9-1916	153·91	143·47	50·93	40·01
"	31-3-1917	169·63	141·44	53·89	46·25
"	30-9-1917	164·17	150·08	55·90	45·92
"	31-3-1918	155·51	146·38	60·26	48·60
"	30-9-1918	176·15	157·22	62·47	50·25
"	31-3-1919	149·50	157·17	64·85	53·06
"	30-9-1919	178·24	105·83	65·27	52·36
"	31-3-1920	177·70	119·84	66·69	54·76
Year ending	31-3-1921	172·87	109·30	65·71	49·15
"	31-3-1922	154·58	99·92	63·63	44·02

Taking from the table the distance travelled by each class of passengers in the year ending the 31st March 1922 and multiplying the figures by the relative numbers of passengers we have approximately—

	Relative number of passengers.	*Distance travelled.*	*Relative passenger-miles*
		Miles.	
1st class ..	1	155	155
2nd class ..	6	100	600
Inter class ..	24	64	1,536
3rd class ..	475	44	20,900
Sum ..	506		23,191

The average distance travelled by all passengers, which is the quotient of the sum of the relative passenger-miles divided by the sum of the relative number of passengers, is thus found to be 45 miles. These distances may be compared with those for the year ending 31st December 1912, which are—

	Relative number of passengers.	*Distance travelled.*	*Relative passenger-miles.*
		Miles.	
1st class ..	1	127	127
2nd class ..	4	98	392
Inter class ..	22	54	1,188
3rd class ..	563	40	22,520
Sum ..	590		24,227

Thus the average distance travelled by all passengers on the North-Western Railway in 1912 was 41 miles, so that the mean distance per passenger has increased by 4 miles during the decade. Seeing that with this increase the speed of travel has decreased from 20·36 miles per hour for passenger trains and 14·27 for mixed trains in 1911, to 19·41 and 13·05 miles per hour respectively in 1922, the

*I am indebted to the courtesy of the officials of the North-Western Railway for supplying me with a great mass of statistics, of the most interesting character, relating to Railway traffic, such as passenger density for every mile of the Railway, number of trains run, and so forth, of which time forbids examination, beyond that given in the present and foregoing sections. Mr. Fakir Chand, Auditor of Statistics, N.-W. Ry., has been most particularly helpful.

approximate average time spent on railway journeys by passengers in passenger trains from station to station, has increased from 2·01 hours to 2·32 hours. If we include, say, 10 to 15 minutes as the average time spent in the train by passengers at the terminal stations, the average time spent on journeys will be about 2½ hours. We might have anticipated therefore that about one-three-hundredth of the population would be enumerated in Railway trains, that is to say, 8,000 persons.

As a matter of fact 69 trains with a total of something less than 14,500 passengers were enumerated on the census night*, so that the census figures are in sensible agreement with the calculation made from the known volume of passenger traffic, and the known average lead and speed of transit.†

The ascertained mean length of journeys by rail in the Punjab has been seen to be a little over 45 miles for each passenger. The modal (or most usual) length of journey will also be less than 45 miles, and the conclusion reached is that the majority ‡ of the journeys made by rail on the North-Western Railway are less than 45 miles in length. This implies that a very considerable proportion possibly 50 per cent. of the rail journeys made are between adjacent districts or between two different points of the same district, and, as we have seen, the duration of the visits so made will on an average be below 2¾ months so that the term "migration" in the restricted sense cannot be applied to them. §

Finally, then we may say, in general, that the census figures showing the percentage of those born outside the confines of a particular district and enumerated in it, are made up of two parts, namely—

(*i*) immigrants proper, as defined by Sir Denzil Ibbetson for the Punjab (*vide* para. 134, page 58 of vol. 1 of the Punjab Census of 1891, a classification followed by Sir Edward Maclagan in Chapter X, page 273 of the Punjab Report for 1901), or by Mr. Gait (*vide* para. 134, pages 89 and 90, Part I, vol. 1 of the Government of India Report for 1911),

(*ii*) the circulating population, made up mostly of persons who are making short trips on business, or for social ceremonies.

To interpret the whole, or even in the greater part of the birth-place figures as the outcome of migration, except to and from places at great distances, and especially for foreign countries, as any form of migration, is to fail to recognise the true meaning of the census returns.

Traffic returns, and extra-Provincial figures of birth-place.

68. Of the 25,101,060 persons enumerated in the Punjab 627,137 or 2·5 per cent. were born outside the Punjab. On the other hand 549,386 persons born in the Punjab were enumerated outside the Province, of whom 530,899 were enumerated in other parts of India. The details of the persons born outside India (so far as they have been reported) are given in the margin.

Emigrants outside India.

Province where enumerated.	Punjab, Persons.	Delhi, Persons.
Hong Kong	1,192	..
Kenya	4,823	..
Sudan ..	16	..
Nyasaland ..	20	..
Tanganyika Territory ..	326	2
Straits Settlements ..	1,877	..
Federated Malay States ..	7,789	..
Unfederated Malay States ..	1,373	..
Ceylon	174	21
Cyprus	122	..
Southern Rhodesia ..	15	..
Somaliland Protectorate ..	125	..
South Africa	186	..
Fiji	449	..
Grand Total ..	18,487	23

In paragraph 64 of this chapter we have found the annual emigration and immigration from and into the Punjab to be approximately 14,000 and 11,000 persons respectively; and we may now compare these figures with the traffic returns of the North-Western Railway showing persons crossing the boundary of the Punjab and Delhi. The figures may

*Between 7 p.m. on the 18th March 1921 and 6 a.m. on the 19th. The arrangements for train and station enumeration were very thorough, a supervisor and enumerators (one of whom was a female) being responsible for each train, the supervisor and male enumerators accompanying it throughout the night. The nett effect of the scheme of enumeration was that it gave the number of persons actually in transit at 6 a.m. on the night of the 18th March 1921. Any person arriving at a station after that time was enumerated at the station itself, except for a certain number who were accommodated in a special enumeration van. Unfortunately there are some rather serious errors in the compilation of the returns for running trains. Thus the only train enumerated in the Amritsar District was 5 Up, which could not contain more than 1,000 passengers, and actually contained 403, though 2,362 persons are shown in transit. The figures given in the last column of Imperial Table III for Amritsar include 1,959 persons, who were counted in the platform enumeration, and do not belong to a running train at all.

†Conversely one might have deduced the mean speed (given the lead) or the mean lead (given the speed) of journeys by rail from the Census figures of numbers of passengers. This converse process is appropriate to the calculation of the mean time spent on journeys by road.

‡Half the total number of journeys will exceed, and half will fall short of the value of the median journey. The median value could have been found approximately, given the mode, from the well-known formula, mean-mode=3 (mean-median).

§It might seem that these journeys should be classified under the heading of "casual" migration in Mr. Gait's scheme: but his restriction of the term to movements between "adjoining villages" precludes this; and we are forced to believe that a great proportion of the movements which affect the census figures have been ignored.

contain a certain amount of overlap, as, while the exact number of passengers reaching and leaving the Punjab between the following stations is known :—

Sarsawa and Kalanaur	.. For the United Provinces,
Attock and Khairabad Mari Indus and Kalabagh Taxilla and Usman Khatar Khushalgarh and Nak Band	For the North-West Frontier Province,
Dhandi and Reti	.. For Simla and Baluchistan,

yet these may include some of the through passengers received from foreign lines at Delhi and Bhatinda.

Passenger traffic entering and leaving the Punjab from and to the Provinces named, in 1922.

Province.	Entering Punjab.	Leaving Punjab.
United Provinces	759,339	813,309
North-West Frontier Province	777,392	719,038
Sindh	276,870	302,593
Other Provinces *via* Delhi ..	132,210	78,231
Other Provinces *via* Bhatinda	132,837	155,544
Totals ..	2,078,648	2,068,715

The traffic figures of passengers to and from the Punjab and Delhi of all classes, for 1922, are those noted in the margin, from which it will be observed that a total of over 4 million persons pass annually across the Punjab borders by rail as compared with the 25,000 whose movements are ascertained from the census returns.

Following the same lines of reasoning as in the preceding paragraph dealing with the internal movements of the population of the Punjab, we conclude that the average duration of stay outside the Province of persons crossing the border is $\frac{550,000}{2,000\,000} \times \frac{3}{2} \times 12 = 5$ months. Thus the trips made outside the Punjab last, on the whole, nearly double the time that intra-provincial trips do. Here again it becomes largely a question of an appropriate definition of migration, but if we adopt 3 months as the dichotomic period below which a visit to another province, or abroad, is not classed as a migration, we find that a very considerable portion of the percentage of Punjabis enumerated elsewhere must be put down as due to the circulation of short-term visitors, and not to migration proper. As journeys by road have been excluded,* and as these would swell the figures of trans-frontier railway traffic, the figures for the average duration of a visit must be correspondingly reduced. We may, therefore, provisionally estimate the duration of extra-provincial journeys as about 5 months. If this figure seems lower than it ought to be compared with the $2\frac{3}{4}$ months' duration of intra-provincial journeys, we must remember that, on the one hand, it includes an enormous number of visits, between adjoining districts which happen to lie in different provinces, and, on the other, that the number of permanent settlers in other provinces from among persons born in the Punjab is very very small. Both these causes will tend to depress the average duration below expectation, the tendency being to associate extra-provincial migration only with long period visits made to Bombay, Bengal, Burma, Kenya, the Malay States, England or America.

Some difficulties of interpretation.

69. It is, so far as the speedy completion of their work is concerned, a great advantage which some writers enjoy, that they are prepared to disregard the existance of logical fallacies so long as the facts advanced are supported by figures. To a writer of this type the fact that 11·5 per cent. of the population is recorded as having been born outside the district in the case of Multan, 14·6 per cent. in the case of Rawalpindi, and 32·8 per cent. in the case of the Kalsia State, is proof that there is a relatively larger number of immigrants into Rawalpindi than into Multan, and into Kalsia than into either of the other places. One possible fallacy, arising from the necessary inclusion of movements which I have classed under the term "circulation," has been dealt with in paragraphs 68 and 69, but it seems possible that an even subtiler fallacy may lurk behind the apparent simplicity of the data. It might take months, or even years, to analyse down to its elements the concept which I shall attempt to expound, and only a preliminary examination of the principle will

*The exclusion is unavoidable, as no statistics of road-traffic are available.

be set forth. In its extreme forms the principle is simple and indeed obvious, and we may start by examining the figures shown in the margin.

Table showing the percentage of persons born in a given area who were (or would be) enumerated in that area.

Area.	Approximate land area in square miles.	Percentage of natives.
1. The world	55,000,000	100
2. India (1911)	1,803,000	99·7
3. The Punjab (1921)	137,000	97·5
4. Average British District or State in the Punjab (1921) ..	3,400	86·1
5. A point on the earth's surface ..	0	0

The entries in rows 1 to 4 will doubtless be accepted as indicating that with the diminution of extension, the percentage of natives must decrease, or the percentage of foreign-born must increase. The entry in row 5 is an obvious deduction from the assumption of *ab initio* mobility of the organism.*

Actually the percentage of foreign-born in every area will never be a single-valued function of the area itself or of the population; but for our present purpose we may say that, in general, the percentage of foreign-born in any region increases as the area or population of the region diminishes. This is *not* a humano-sociological or economic law, but a law of animal movement in relation to the properties of space. Now, just as there is an increase in the percentage of foreign-born down from the world (0) to the average of a Punjab district or State (13·9), so it seems indisputable that the percentage of foreign-born must increase continuously (though as a multiple-valued† function of the area) as the districts or States considered diminish in area or population. Though it is clear that the law is true as a generalisation covering wide variations of area, it is important to see to what extent it holds for the variations in size which occur in the different districts and States of the Punjab. If it does hold we can predict that there will probably be a negative correlation between the population of a district and the percentage of foreign-born. Actually we find a correlation of $-·24 \pm ·098$ subsisting between the two variables, and the law therefore is applicable even within a comparatively limited range of variation of area.‡

The equation expressing the percentage of foreign-born (F) in a district or State in terms of the population (P) of the district or State, is

$$F = 15·9 - 5·57 \times 10^{-6} P.$$

We have thus reached the important conclusion that it is idle to make deductions from the percentage of immigrants into a district or State till the crude percentage has been corrected for the size or population of the district or State concerned. An approximate correction would be to subtract from the crude percentage of foreign-born the number deduced from the above regression equation. What the full correction would be, were an exact investigation of this point carried out, must be left to future discovery.§

In closing this section I will merely put before the reader a question, which will pointedly show the importance of the foregoing discussion, in preventing the formation of hasty and fallacious judgments on the problem of migration.

The following percentages of persons foreign-born to the areas named and enumerated in the self-same areas are recorded for the 1921 Census:—

Area.	Population.	Percentage of foreign-born.
Rohtak District	772,272	12·3
Dujana State	25,833	26·3
Jullundur District	822,544	10·9
Kapurthala State	284,275	17·1

*It would not be true of the motionless vegetable kingdom, where the percentage of natives will always be cent. per cent.

†I make no apology for borrowing an occasional phrase from the technique of that reservoir of accurate expression, to wit mathematics, though I am well aware that there is a tendency for the classical man to regard any idea he cannot grasp instantaneously as either erroneous or futile. It is time he became more Socratic in his outlook.

‡This correlation co-efficient, as well as the regression equation which follows, are found after exclusion of the Colony districts of Lyallpur, Montgomery, Shahpur and Sheikhupura.

§ Unless my very limited knowledge of the literature of Census enquiries is in error, the point has not been elucidated so far. G. H. Knibbs in a most detailed and illuminating treatise on "The Mathematical Theory of Population" printed as Appendix A, Volume 1 of the Census of the Commonwealth of Australia, 1917, does not deal with the matter in his chapter on migration.

Dujana State is in the Rohtak District. Kapurthala State and the Jullundur District adjoin. Is the percentage excess of foreign-born in the two Punjab States to be attributed to political, sociological and economic causes ? I leave the reader to ponder the question for himself in the light of the arguments adduced in this paragraph, and to admit that but for these arguments his answer would have been an immediate, but unjustified affirmative.*

Should the reader desire, in spite of all that has been said, to compare the percentage of foreign-born persons in one district with that of another which differs widely from it in population, he may, provisionally, apply the corrections in the following table, which will reduce all districts to a standard population of 500,000.

Table giving the correction to be applied to the observed percentage of foreign-born in any district, to reduce it to the common basis of a district of a population of 500,000.

The correction must be subtracted from the observed percentage when it is negative, and added when it is positive.

Population of District.	Correction to percentage of foreign-born (*i.e.*, persons not born in District).
50,000	—2·5 per cent.
100,000	—2·2 "
200,000	—1·7 "
300,000	—1·1 "
400,000	—0·6 "
500,000	0 "
600,000	+0·6 "
700,000	+1·1 "
800,000	+1·7 "
900,000	+2·2 "
1,000,000	+2·8 "
1,100,000	+3·3 "
1,200,000	+3·9 "

70. Any one who has followed with any degree of attention the reasoning of this and of the preceding chapter, will have perceived that more caution is desirable in drawing conclusions from statistical material than has been customary in the past. One is, in fact, almost tempted to assert that knowledge based on direct appeal to statistics is the " Mâyâ ", or " great illusion " of the old Vedantic philosophy, and that though the substance can be resolved from the shadow, it is only by steadfast vision aided by the crystal lenses of mathematics shaped by such master minds as those of Laplace, Gauss, Francis Galton and Karl Pearson. Mâyâ, or Atman ?

To flaunt unanalysed figures on printed pages is, perchance, but to increase the number of dancing shadows, making the perception of truth more, rather than less difficult than before.†

71. With the warnings emphasized in the preceding paragraphs in mind the data of birth-place summarised in graphic form for the whole of the Punjab will now be presented. Once, again, the most appropriate form of presentation appears to be that of systems of isopleths drawn on a small scale map of the Punjab, showing the most prominent features of the place-to-place variation of the birth-place statistics. The isopleths in each case are drawn from the tahsil figures. Now the census schedules do not record the numbers of persons enumerated in each tahsil who were born in that particular tahsil, but only the percentage of persons born in the district in which the tahsil was situated and enumerated in the tahsil. Naturally, the proportion of persons born in a given district and enumerated in a tahsil in that district, will be greater than the number of persons born and enumerated in the same tahsil. Thus, at the outset the percentage figures of foreign-born persons in each tahsil will be greater (though how much greater it would only be possible to calculate by elaborate mathematical reasoning) than the figures adopted for the purpose of the diagrams. Graphic presentation of the data.

*If time permits (an unlikely contingency) I hope to examine in an Appendix what correction should be applied to the crude figures of foreign-born for a given area and population and rate of movement.

†Thus, if, in respect of this problem of migration, a metaphor may be permitted, it is as though one instantaneously observed myriads of flying-fish emerging from and disappearing into a sunlit sea, and attempted to determine by intuition alone the movements made below the surface.

The diagrams consist of—

Diagram 27, isopleths of percentage numbers born in each district and enumerated in each tahsil or state;

Diagram 28, isopleths of percentage of persons enumerated in each tahsil or district and born in a contiguous district or state;

Diagram 29, isopleths of percentage of persons enumerated in each tahsil, but born outside the Punjab.

As regards diagram 27, the modification just noticed must be applied, and, if we may lapse for a moment into an interpretation, with all the examples of statistical fallacies confronting us, we may conclude that the Lyallpur and Montgomery colonies contain the largest number of emigrants! Also the greater proportion of the stay-at-home population of the Punjab is included in the Rawalpindi and Multan Divisions (excluding the colonies) and in the Himalayan and Sub-Himalayan tracts. The reader will, doubtless, observe impatiently that these conclusions could have been reached without any elaborate refinements of analysis. Very possibly this is so, but if he supposes that a cursory glance of the figures will throw light on the relative amount of migration into the various districts within these wide limits, then he will fall into a grievous error due to one or other of the fallacies previously examined.

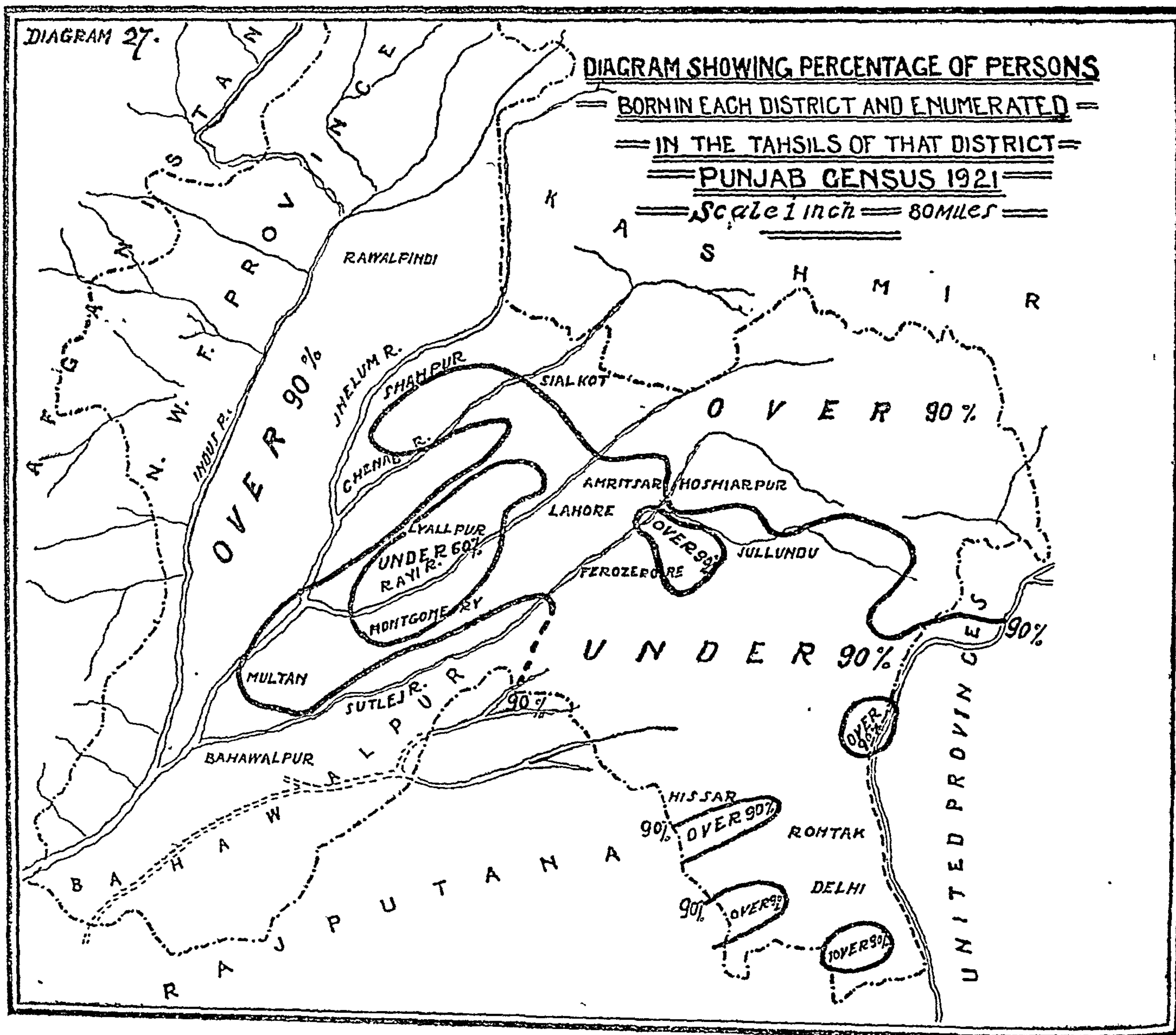
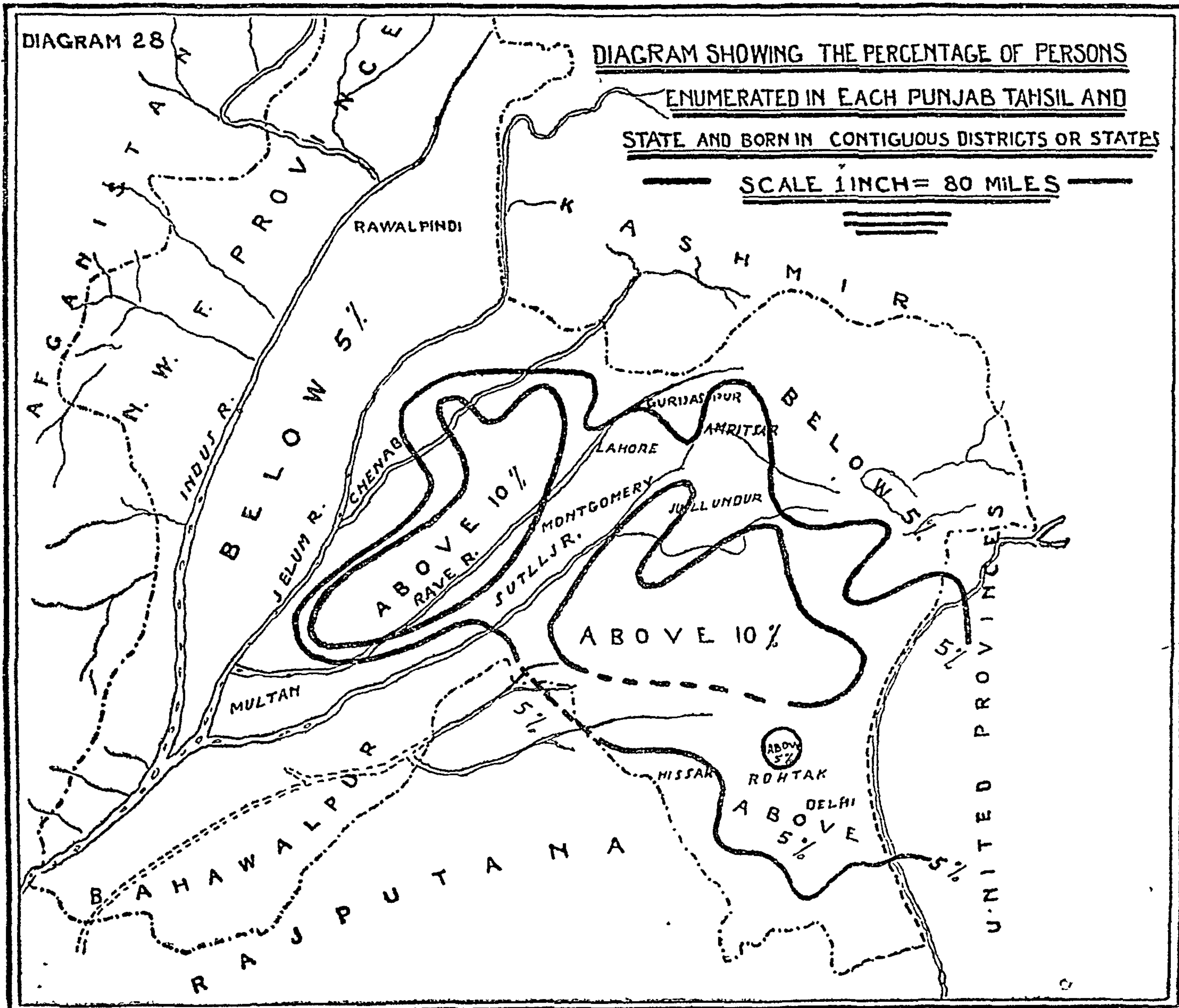
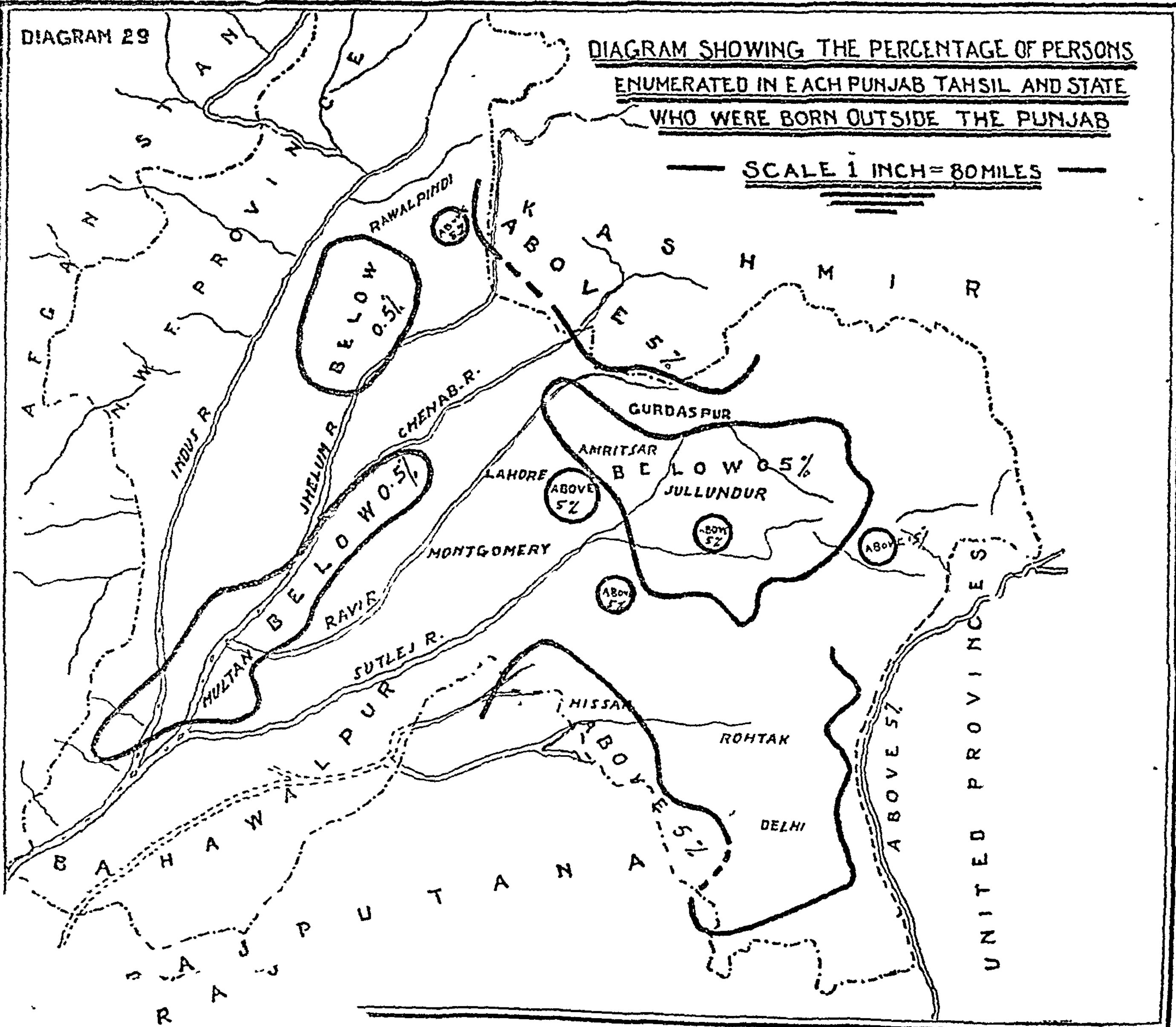


Diagram 28 shows the percentage number of persons in each tahsil who were born in contiguous districts, contiguous that is, not necessarily to the tahsil itself, but to the district in which the particular tahsil is situated. These figures must be interpreted in the light of the remarks regarding the circulation of the population, and, where there are areas within which the percentage of persons born in contiguous districts is high, say over 10 per cent., the characteristic must be attributed as due in part to the great daily movement of the population, and not as wholly due to immigration proper. These figures are particularly in need of correction for the rapidity of the population circulation, for the length of the boundary line between each district and its neighbours, and for the presence or absence of natural barriers of inter-communication.



Lastly, diagram 29 which shows the percentage of persons enumerated in each Punjab tahsil and State and born outside the Punjab, the figures at first sight seem to be perfectly straightforward, and it might appear as if there were no obstacles to an appreciation of the shape of the isopleths. We observe, for instance, that the regions of high percentage numbers of foreign-born, say, above 5 per cent., are included in three narrow strips, one along the Jumna adjoining the United Provinces, the next in the areas of Ferozepore and Hissar which adjoin Rajputana, and the third in two narrow pieces of territory belonging to the Murree and Sialkot tahsils adjacent to Kashmir. For the rest, the percentage of persons born outside the Punjab, enumerated in the various Punjab tahsils is very small, and there are large tracts comprising the central districts of the Punjab, and a long narrow region running parallel to the course of the Chenab from Chiniot in the Lyallpur district to Rajanpur in the Dera Ghazi Khan district, together with the tahsils of Pindigheb, Talagang, Khushab, Chakwal and Fatehjang, in which the percentage of persons born outside the Punjab does not exceed 0·5 per cent. The long strip lying along the Chenab referred to above includes Jhang, and grazes Lyallpur, and it is clear that the canal colonies have not become the happy hunting ground of the speculator from outside the Punjab, though this is less true of Montgomery (3 per cent.) and Khanewal (2 per cent.) than it is of Lyallpur (1·1 per cent.), Sargodha (1·7 per cent.) and Shahpur (·5 per cent.).



Comparison of the statistics with those of 1911.

72. The figures for some of the salient birth-place statistics will now be given in comparative form for 1921 and for previous censuses, though mostly without any attempt to solve the many difficult problems of interpretation which they present. Thus the table in the margin shows the change in the number of persons *per mille* enumerated in the districts of birth, in contiguous districts, and in other districts of the Province, since 1901.

Number of persons born in the specified localities and enumerated within the Province.

Born in	Enumerated in	1901.	1911.	1921.
Punjab District or State	Same District or State	976	944	861
Contiguous District ..	District ..	19	41	75
Non-contiguous District	District ..	5	15	39
Outside the Province ..	The Province ..	..	..	25

The extent to which the other Provinces of India contribute to the foreign-born population of the Punjab is shown in the following table :—

Immigration from other Provinces to Punjab and Delhi.

Province or State.	1921.	1911.	Province or State.	1921.	1911.
Rajputana Agency	257,716	248,152	Mysore	301	273
United Provinces ..	269,239	219,913	Baroda	119	225
Kashmir	75,344	72,369	Andaman-Nicobar	72	109
North-West Frontier Province ..	34,868	35,271	Assam	496	..
Bombay	11,223	10,583	Bihar and Orissa	1,140	..
Bengal	5,950	5,136	Gwalior	3,250	..
Eastern Bengal	..	483	Cochin	36	..
Baluchistan	3,609	3,704	Travancore	9	..
Central India Agency ..	913	3,630	India, unspecified	1,806	1,155
Burma	1,667	1,550	French and Portuguese Settlements	188	100
Central Provinces and Berar ..	2,844	1,500			
Madras	2,136	1,110			
Hyderabad	1,466	689	Total ..	674,395	605,952

Although in 1921 a great number of persons from Gujrat emigrated to Burma, as in 1911 the districts of Lahore and Ludhiana contained the greatest number of immigrants from Burma. Of course a certain number of the recorded immigrants from Burma are not Burmese at all, but merely the children of Punjabi emigrants born while their parents were residing in Burma. Further details are given in the marginal table.

Districts.	Emigrants to Burma.	Immigrants from Burma.
Amritsar	2,388	211
Lahore	1,659	263
Jhelum	867	70
Patiala	607	116
Rawalpindi	956	72
Ludhiana	865	301
Jullundur	685	26
Gujrat	1,074	55
Unspecified	11,837	503

The variation in the proportion of females to 100 males enumerated outside their district or State of birth since 1911 is shown in the marginal table. I am very loath to believe that the differences between the 1911 and 1921 figures is the result of any change in the fundamental customs of the country, and that Hindus are more inclined than ever to choose their wives from distant districts, or that Musalmans tend to go less further afield for their brides than in 1911. The decrease of the relative number of foreign-born females in Delhi from 214 per cent. to 129 per cent. is rather more than one could wisely attribute to the result of random sampling. A very full *adhoc* enquiry would be necessary in order to decide whether the Delhi Hindus were relying on the locally born women as their brides more than they did 10 years ago. The truth probably is that in the course

Proportion of females to males of Punjab and Delhi.

District.	PROPORTION OF FEMALES TO EVERY 100 MALES.			
	Immigrants.		Emigrants.	
	1911.	1921.	1911.	1921.
HINDU.				
Kangra	126	142	145	152
Ambala	184	192	150	157
Rohtak	331	354	234	329
Karnal	193	243	193	240
Hissar	179	263	189	157
Jind	208	218	259	336
Average	202	232	196	240
MUSALMAN.				
Attock	122	101	94	74
Dera Ghazi Khan ..	68	69	71	54
Jhelum	167	158	84	78
Rawalpindi	83	68	148	138
Gujrat	174	93	96	102
Muzaffargarh	79	75	72	74
Mianwali	76	63	85	79
Average	110	90	90	84
HINDU.				
Delhi	214	129	261	342

of the last decade there has been a vast influx of foreign-born male labourers who have not brought their female relatives with them at all, and, until these males either settle down in Delhi, or depart from the Province, the comparative smallness of the number of foreign-born females will continue. When the Delhi Province emerges from its position of unstable economic equilibrium it seems probable that the percentage of foreign-born females to males will revert to about its old figure of 200, provided, of course, that the composition of the Hindu population is not materially altered by the formation of the new Province.

Immigration from and Emigration to other countries.

73. The numbers of persons born in foreign countries and enumerated in the Punjab and Delhi in 1921 was 38,537 of whom 35,252 were enumerated in the Punjab and 3,285 in the Delhi Province as compared with the total of 54,267 enumerated in 1911. The details are given in the marginal table. The corresponding figures for 1901 were 39,504, and Rai Bahadur Pandit Hari Kishen Kaul in comparing the 1911 and 1901 figures attributes the increase largely to the development of commerce and industry. If this explanation is accepted the decrease in the number of foreigners in 1921, to about the same numbers as in 1901, would be explained by the setback to commercial relations caused by the war. Most of the decrease it will be observed is due to a falling off of more than 10,000 persons born in Asiatic countries other than India. The decrease in the number of Europeans in the Punjab is possibly to be explained by the reduction of the British Army; but on this point I have no exact information. The details of the emigration from Asiatic countries is shown in the marginal table.

Countries.	Total	Punjab.	Delhi.
Asiatic countries ..	18,227	17,953	274
European " ..	19,184	16,273	2,911
African " ..	646	583	63
American " ..	331	307	24
Australasian " ..	149	136	13
Total ..	38,537	35,252	3,285

Countries.	Total.	Punjab.	Delhi.
Afghanistan	10,689	10,603	86
China	426	423	3
Nepal	4,913	4,780	133
Tibet	1,684	1,678	6

The details of immigrants from European countries is shown in the marginal table. The most notable difference between the 1911 and 1921 figures is the reduction in the number of Germans from 76 in 1911 to 7 in 1921. Belgians have decreased from 61 to 35 and Maltese from 60 to 7. I am surprised to see that only 5 Greeks were enumerated in the Punjab in 1921 as the Firm of Messrs. Ralli Brothers alone would supply that number.

Countries of birth.	Total.	Punjab.	Delhi.
United Kingdom of Great Britain and Ireland ..	18,903	16,068	2,835
Portugal	56	51	5
Germany	7	5	2
France	55	40	15
Belgium	35	35	..
Italy	21	14	7
Malta	7	4	3
Spain	15	8	7
Switzerland	14	6	8
Russia	2	1	1
Holland	2	2	..
Austria Hungary	..	..	..
Greece	5	2	3
Sweden and Norway ..	3	2	1
Turkey in Europe ..	6	2	4
Denmark, Gibraltar and Iceland	20	17	3
Unspecified	33	16	17
Total ..	19,184	16,273	2,911

Of immigrants from the British Isles of whom the details are given in the marginal table, the Irish alone appear nearly to hold their own, having decreased only from 2,915 in 1911 to 2,883 in 1921, whereas the Scots have fallen from 1,790 in 1911 to 1,306 in 1921, while the English and Welsh have fallen from 18,596 to 14,714. Possibly in its present condition Irishmen find their native country less pleasant to return to than does the Scotsman, Englishman, or Welshman. The details of emigration from the Punjab and Delhi to places outside are given in Subsidiary Table VI, but this table is very incomplete, and contains no record of the number of Punjabis in Europe or America.

Birth place.	Total.	Punjab.	Delhi.
England and Wales ..	14,714	12,722	1,992
Scotland	1,306	1,197	109
Ireland	2,883	2,149	734
Unspecified	..	..	..
Total ..	18,903	16,068	2,835

74. The chief figures as regard birth-place are given in Table XI, Part A, which gives the detail for Districts and States, Table XI, Part B, which gives details for cities and selected towns, and Table XI, Part C, which gives details for Delhi Province and Delhi City. A word of warning is necessary as regards the entries in the first row " Punjab" of Table XI, Part A, as this does not mean that the figure entered opposite the row, and under any particular column, gives the number of persons enumerated in the particular district who were born in the Punjab. It simply means the total number of persons enumerated in the particular district. The actual number of persons enumerated in any district and born within the Province is shown in row 3 of Table XI, Part A. Provincial Table XI gives the birth-place of immigrants into various canal colonies according to caste, age and occupation ; part I applies to the Lower Chenab Colony, II to the Lower Jhelum Colony and III to the Upper Bari Doab Colony. In addition to the Imperial and Provincial tables 7 subsidiary tables are printed as appendices to the present chapter. Reference to tables

Subsidiary Table I gives details of birth-place by natural divisions, that is to say, according to the grouping of districts and states into Indo-Gangetic Plain West, Himalayan, Sub-Himalayan and North-West Dry Area.

Subsidiary Table II gives a classification of emigration on the same basis of natural divisions.

Subsidiary Table III compares the figures of birth-place by natural divisions for 1911 with those of 1921 for both the Punjab and Delhi.

Subsidiary Table IV gives the details of migration between the Provinces of the Punjab and Delhi and the other parts of India, the other parts of India being named in alphabetical order under the classes British Territory and Federated States separately.

Subsidiary Table V gives the calculated number of persons travelling between districts of the Punjab during the decade 1911-1921 as determined solely from the Census figures of birth-place.

Subsidiary Table VI gives the details of persons enumerated outside the Punjab and Delhi. So far as the figures relate to persons enumerated in other parts of India, this table may be accepted as being as correct as any of the Punjab figures, but, as has been already noted, the figures are very incomplete in respect of countries outside India, and, in particular, of places in Europe and America.

Subsidiary Table VII is one specially prepared by Mr. Middleton to show the effect of what he calls the " balance of migration," which phrase Mr. Middleton defines as equal to the number of immigrants minus the number of emigrants. Actually as we have seen, the number of immigrants and emigrants to any particular district or State in the Punjab is not known to any great degree of approximation, and to use the crude figures of birth-place without any correction for the " circulation " nor for the effect of area and population seems to me likely to be a fertile source of fallacious inference.

Subsidiary Table VIII shows the birth-place of persons according to the Tahsil or State of enumeration.

Subsidiary Table IX gives the percentages based on Subsidiary Table VIII.

Mr. Middleton has further proposed two other functions which he calls " the co-efficient o mi ration " and " the effect of migration." The co-efficient of migrati n he defines as equal to immigrants minus emigrants d vided by imm grants plus emigrants. " The effect of migration " he defines as the number of immi rants minus emigrants, divided by total population. Had Mr. M ddleton remained to develop the ideas of which these functions were the synthesis, no doubt the results would have been of considerable interest.

I. Showing birth-place of persons enumerated in each district and State of the Punjab. II. Showing place of enumeration of persons born in each district or State of the Punjab. III. Showing birth-place by natural divisions. IV. Showing birth-place of—(*a*) persons enumerated in the Punjab and born in other Provinces and States in 1911 and 1921, commonly classed as immigrants, (*b*) persons born in the Punjab and enumerated in other Provinces and States in 1911 and 1921, commonly known as emigrants. V. Showing *calculated* number of persons passing annually from each district in the Punjab, to every other district in the Punjab. VI. Showing the details of emigrants enumerated outside the Punjab and Delhi. VII. Migration to the canal colonies, 1911 and 1921. VIII. Showing the birth-place of persons according to tahsil or State of enumeration. IX. Showing the percentages based on Subsidiary Table VIII.

SUBSIDIARY TABLE I.

Immigration (actual figures).

District, State and Natural Division where enumerated.	BORN IN (000's OMITTED).																	
	District, State (or Natural Division).			*Contiguous District or State in the Province.*			*Other parts of the Province.*			*Contiguous parts of other Provinces, &c.*			*Non-Contiguous parts of other Provinces, &c.*			*Outside India.*		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PUNJAB	24,474	13,413	11,061	..	..	..	..	..	..	444	204	240	148	89	59	35	26	9
1. INDO-GANGETIC PLAIN WEST	10,599	5,935	4,664	432	210	222	38	25	13	237	111	176	83	54	29	8	7	1
1. Hissar	716	401	315	53	15	38	11	4	7	18	6	12	18	9	9	..	..	..
2. *Loharu State*	19	10	9	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Rohtak	677	393	284	55	12	43	6	2	4	22	6	16	12	4	8	..	..	..
4. *Dujana State*	19	12	7	5	1	4	1	..	1	..	..	..	1	..	1	..	..	..
5. Gurgaon	581	344	240	14	3	11	6	1	5	68	16	52	9	3	6	..	..	..
6. *Pataudi State*	12	8	4	4	1	3	..	..	..	..	..	..	1	..	1	..	..	..
7. Karnal	730	421	309	60	17	43	11	5	6	15	5	10	13	6	7	..	..	..
8. Jullundur	733	424	309	70	21	49	15	7	8	..	..	..	4	2	2	1	1	..
9. *Kapurthala State* ..	236	142	94	44	13	31	3	1	2	..	..	..	1	..	1	..	..	..
10. Ludhiana	475	285	190	78	26	52	9	5	4	..	..	..	5	3	2	..	..	..
11. *Malerkotla State*	66	42	24	12	4	8	2	1	1	..	..	..	..	..	..	..	..	..
12. Ferozepore	894	506	388	135	61	74	17	11	6	28	16	12	23	15	8	1	1	..
13. *Faridkot State* ..	108	67	41	31	11	20	9	4	5	..	..	..	3	2	1	..	..	..
14. *Patiala State*	1,266	756	510	183	60	123	14	7	7	22	6	16	15	8	7	..	..	..
15. *Jind State*	232	145	87	61	19	42	5	2	3	..	..	..	10	4	6	..	..	..
16. *Nabha State*	200	129	71	49	13	36	4	2	2	7	1	6	3	2	1	..	..	..
17. Lahore	895	502	393	99	47	52	87	60	27	..	..	..	47	34	13	4	3	1
18. Amritsar	824	474	350	73	24	49	23	15	8	..	..	..	9	6	3	1	1	..
19. Gujranwala	543	308	235	63	30	33	10	5	5	..	..	..	7	5	2	..	..	..
20. Sheikhupura	315	177	138	87	45	42	113	66	47	..	..	..	7	5	2	1	1	..
2. HIMALAYAN	1,675	876	799	34	18	16	9	4	5	5	3	2	10	7	3	5	3	2
21. *Nahan State*	126	69	57	8	4	4	4	3	1	..	..	..	2	1	1	..	..	..
22. Simla	31	20	11	1	1	..	7	5	2	..	..	..	4	3	1	2	1	1
23. *Simla Hill States*	287	148	139	12	8	4	5	2	3	..	..	..	2	2	..	1	1	..
24 *Bilaspur State*	88	48	40	7	3	4	3	1	2	..	..	..	..	..	..	..	..	..
25. Kangra	732	378	354	27	11	16	2	1	1	1	1	..	2	1	1	2	1	1
26. *Mandi State*	175	90	85	7	4	3	2	..	2	..	..	..	..	..	..	..	..	..
27. *Suket State*	53	28	25	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
28. *Chamba State*	136	71	65	2	1	1	1	1	..	2	1	1	..	..	..	..	..	..
3. SUB-HIMALAYAN	5,477	2,985	2,492	189	71	118	33	18	15	78	39	39	49	29	20	13	10	3
29. Ambala	582	340	242	56	19	37	12	8	4	7	3	4	22	12	10	2	1	1
30. *Kalsia State*	38	25	13	15	6	9	2	1	1	..	..	..	2	1	1	..	..	..
31. Hoshiarpur	865	479	386	53	15	38	8	4	4	..	..	..	2	1	1	..	..	..
32. Gurdaspur	775	441	334	51	17	34	10	6	4	11	4	7	3	1	2	2	1	1
33. Sialkot	869	484	385	38	12	26	11	7	4	14	4	10	4	2	2	2	2	..
34. Gujrat	768	410	358	37	19	18	7	4	3	8	3	5	4	2	2	..	..	..
35. Jhelum	451	229	222	14	5	9	5	4	1	4	2	2	3	2	1	..	..	..
36. Rawalpindi	486	254	232	17	10	7	23	16	7	21	15	6	16	12	4	6	5	1
37. Attock	495	254	241	7	3	4	3	3	..	2	1	1	4	3	1	1	1	..
4. NORTH-WEST DRY AREA ..	5,374	2,914	2,460	173	98	75	441	259	182	38	22	16	42	27	15	9	6	3
38. Montgomery	558	301	257	65	36	29	79	48	31	..	..	..	10	7	3	2	1	1
39. Shahpur	637	347	290	49	26	23	28	15	13	..	..	..	5	3	2	1	1	..
40. Mianwali	343	180	163	4	2	2	3	2	1	2	1	1	5	4	1	1	1	..
41. Lyallpur	505	273	232	124	69	55	340	198	142	..	..	..	10	7	3	..	..	..
42. Jhang	549	293	256	13	7	6	6	4	2	..	..	..	1	1	..	..	..	..
43. Multan	788	426	362	43	25	18	46	29	17	..	..	..	11	6	5	2	2	..
44. *Bahawalpur State* ..	697	381	316	31	19	12	23	13	10	22	13	9	8	4	4	..	..	..
45. Muzaffargarh	548	297	251	16	9	7	2	1	1	..	..	..	2	1	1	..	..	..
46. Dera Ghazi Khan	483	265	218	4	2	2	3	2	1	2	1	1	1	1	..	3	1	2
DELHI	303	178	125	..	..	..	..	..	..	66	29	37	116	72	44	3	3	..
INDO-GANGETIC PLAIN WEST ..	303	178	125	..	..	..	..	..	..	66	29	37	116	72	44	3	3	..
Delhi	303	178	125	..	..	..	..	..	..	66	29	37	116	72	44	3	3	..

SUBSIDIARY TABLE II.

Emigration (actual figures).

District, State and Natural Division where born.	Enumerated in (000's omitted).																	
	District, State (or Natural Division).			*Contiguous District or State in the Province.*			*Other parts of the Province.*			*Contiguous parts of other Provinces, &c.*			*Non-Contiguous parts of other Provinces, &c.*			*Outside India*		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PUNJAB	24,474	13,413	11,061	..	..	..	..	..	..	321	176	145	210	151	59	18	15	3
1. INDO-GANGETIC PLAIN WEST	10,599	5,935	4,664	462	233	229	44	27	17	152	56	96	104	79	25	..	..	..
1. Hissar	716	401	315	90	35	55	27	14	13	14	6	8	9	6	3	..	..	..
2. *Loharu State*	19	10	9	3	1	2	1	..	1	..	..	..	..	..	..	..	..	..
3. Rohtak	677	393	284	52	12	40	12	7	5	22	8	14	8	5	3	..	..	..
4. *Dujana State*	19	12	7	4	1	3	1	..	1	..	..	..	..	..	..	..	..	..
5. Gurgaon ..	584	344	240	21	4	17	20	10	10	55	17	38	6	5	1	..	..	..
6. *Pataudi State*	12	8	4	2	..	2	1	1	..	..	..	..	..	..	..	..	..	..
7. Karnal	730	421	309	59	17	42	11	5	6	8	2	6	7	4	3	..	..	..
8. Jullundur	733	424	309	67	23	44	127	76	51	..	..	..	15	10	5	..	..	..
9. *Kapurthala State*	236	142	94	32	10	22	10	5	5	..	..	..	..	..	..	..	..	..
10. Ludhiana	475	285	190	67	23	44	38	22	16	..	..	..	7	6	1	..	..	..
11. *Malerkotla State*	66	42	24	8	3	5	8	2	6	..	..	..	..	..	..	..	..	..
12. Ferozepore	894	506	388	110	45	65	15	8	7	6	3	3	4	3	1	..	..	..
13. *Faridkot State*	108	67	41	21	7	14	4	2	2	..	..	..	..	..	..	..	..	..
14. *Patiala State*	1,266	756	510	183	58	125	21	11	10	9	1	8	11	8	3	..	..	..
15. *Jind State*	232	145	87	53	12	41	3	1	2	..	..	..	2	1	1	..	..	..
16. *Nabha State*	200	129	71	50	14	36	7	2	5	1	..	1	3	1	2	..	..	..
17. Lahore	895	502	393	91	45	46	23	12	11	..	..	..	32	22	10	..	..	..
18. Amritsar	824	474	350	104	44	60	91	54	37	..	..	..	26	19	7	..	..	..
19. Gujranwala	543	308	235	84	40	44	22	13	9	..	..	..	7	5	2	..	..	..
20. Sheikhupura	315	177	138	17	8	9	..	..	..	..	..	..	..	..	..	..	..	..
2. HIMALAYAN	1,675	876	799	28	10	18	21	13	8	4	2	2	9	7	2	..	..	..
21. *Nahan State*	126	69	57	2	1	1	1	..	1	..	..	..	1	1	..	..	..	..
22. Simla	31	20	11	4	1	3	6	4	2	..	..	..	4	3	1	..	..	..
23. *Simla Hill States*	287	148	139	3	1	2	8	3	5	..	..	..	1	1	..	..	..	..
24. *Bilaspur State*	88	48	40	4	1	3	2	1	1	..	..	..	..	..	..	..	..	..
25. Kangra	732	378	354	33	15	18	13	11	2	2	1	1	5	4	1	..	..	..
26. *Mandi State*	175	90	85	6	3	3	2	..	2	..	..	..	..	..	..	..	..	..
27. *Suket State*	53	28	25	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..
28. *Chamba State*	136	71	65	8	4	4	1	1	..	..	..	..	..	..	..	..	..	..
3. SUB-HIMALAYAN	5,477	2,985	2,492	313	136	177	365	220	145	76	40	30	80	61	19	..	..	..
29. Ambala	582	340	242	77	30	47	32	19	13	3	1	2	15	10	5	..	..	..
30. *Kalsia State*	38	25	13	8	3	5	1	..	1	..	..	..	..	..	..	..	..	..
31. Hoshiarpur	865	479	386	79	28	51	95	61	34	..	..	..	9	7	2	..	..	..
32. Gurdaspur	775	441	334	56	17	39	82	49	33	13	6	7	9	6	3	..	..	..
33. Sialkot	869	484	385	70	29	41	152	89	63	19	8	11	11	8	3	..	..	..
34. Gujrat	768	410	358	42	20	22	38	21	14	7	3	4	15	11	4	..	..	..
35. Jhelum	451	229	222	38	21	17	16	11	5	2	1	1	18	15	3	..	..	..
36. Rawalpindi	486	254	232	7	3	4	15	10	5	5	3	2	18	14	4	..	..	..
37. Attock	495	254	241	12	7	5	6	4	2	8	6	2	4	2	2	..	..	..
4. NORTH-WEST DRY AREA ..	5,374	2,914	2,460	93	51	42	23	13	10	10	6	4	17	12	5	..	..	..
38. Montgomery	558	301	257	78	42	36	27	16	11	..	..	..	..	..	..	..	..	..
39. Shahpur	637	347	290	20	11	9	11	9	5	..	..	..	3	2	1	..	..	..
40. Mianwali	343	180	163	7	4	3	12	7	5	4	3	1	1	..	1	..	..	..
41. Lyallpur	505	273	232	37	19	18	16	9	7	..	..	..	1	1	..	..	..	..
42. Jhang	549	293	256	69	38	31	8	5	3	..	..	..	..	..	..	..	..	..
43. Multan	788	426	362	29	17	12	8	5	3	..	..	..	5	3	2	..	..	..
44. *Bahawalpur State* ..	697	381	316	10	5	5	10	6	4	3	2	1	2	1	1	..	..	..
45. Muzaffargarh	548	297	251	17	10	7	3	2	1	..	..	..	1	1	..	..	..	..
46. Dera Ghazi Khan	483	265	218	13	8	5	4	3	1	2	1	1	3	2	1	..	..	..
DELHI	303	178	125	..	..	..	..	..	..	30	7	23	39	23	16	..	..	..
INDO-GANGETIC PLAIN WEST ..	303	178	125	..	..	..	..	..	..	30	7	23	39	23	16	..	..	..
Delhi	303	178	125	..	..	..	..	..	..	30	7	23	39	23	16	..	..	..

SUBSIDIARY TABLE III.

Migration between natural divisions (actual figures) compared with 1911.

Natural Division in which born.		Number enumerated (000's omitted) in Natural Division.						
		Punjab.	Delhi.	Indo-Gangetic Plain West.		Himalayan.	Sub-Himalayan.	North-West Dry Area.
				Punjab.	Delhi.			
1		2	3	4	5	6	7	8
PUNJAB	1921	24,474	65	11,069	65	1,718	5,699	5,988
DELHI	1921	35	302	31	302	..	2	2
PUNJAB AND DELHI ..	1921	24,509	367	11,100	367	1,718	5,701	5,990
	1911	23,528	..	10,615	..	1,703	5,663	5,547
Indo-Gangetic Plain West .. (Punjab)	1921	11,105	57	10,599	57	8	164	334
(Delhi)	1921	35	302	31	302	..	2	2
Indo-Gangetic Plain West, Punjab and Delhi ..	1921	11,140	359	10,630	359	8	166	336
	1911	10,737	..	10,217	..	8	171	341
Himalayan	1921	1,724	2	18	2	1,675	30	1
	1911	1,707	..	16	..	1,658	31	2
Sub-Himalayan	1921	6,154	5	363	5	35	5,477	279
	1911	6,114	..	331	..	37	5,443	303
North-West Dry Area ..	1921	5,490	1	89	1	..	27	5,374
	1911	4,969	..	51	..	..	18	4,900

SUBSIDIARY TABLE IV.

Migration between the Provinces of the Punjab and Delhi and other parts of India.

NOTE.—This table is divided into 3 parts—

(*i*) Showing the total figures of immigration to and emigration from the whole of the Punjab and Delhi Provinces (with details of British Territory and Punjab States) taking all the other Provinces of India together.

(*ii*) Containing details of migration between the Punjab and Delhi Province (British Territory and Punjab States) and the British Territory of each of the other Provinces.

(*iii*) Giving similar details of migration between the Punjab and Delhi Province (British Territory and Punjab States) and the Feudatory States of the other Provinces.

Province or State.	Immigrants to Punjab.	Immigrants to Delhi.	Immigrants to Punjab and Delhi.			Emigrants from Punjab.	Emigrants from Delhi.	Emigrants from Punjab and Delhi.			Excess (+) or deficiency (—) of migration over emigration.	
	1921.	1921.	1921.	1911.	Variation.	1921.	1921.	1921.	1911.	Variation.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12	13
I.—TOTAL ..	591,885	182,485	†674,395	605,952	+68,443	*530,899	69,175	* & § 500,099	504,173	—4,074	+174,296	+101,779
1. British Territory	489,430	182,485	574,800	514,162	+60,638	468,631	66,315	441,900	438,443	+3,457	+132,900	+75,719
2. Punjab States ..	102,455	..	99,595	91,790	+7,805	38,026	2,860	33,997	39,991	—5,994	+65,598	+51,799
II.—BRITISH TERRITORY. TOTAL ..	286,300	140,864	†331,218	278,275	+52,943	*376,158	63,202	* & § 339,385	332,769	+6,616	—8,167	—54,494
1. British Territory	259,068	140,864	306,846	255,042	+51,804	335,938	60,342	303,234	297,201	+6,033	+3,612	—42,159
2. Punjab States ..	27,232	..	24,372	23,233	+1,139	18,952	2,860	14,923	14,947	—24	+9,449	+8,286
AJMER MERWARA ..	1,536	278	1,814	1,543	+271	4,028	2,241	6,269	4,111	+2,158	—4,455	—2,568
1. British Territory	898	278	1,176	1,317	—141	3,478	2,241	5,719	2,993	+2,726	—4,543	—1,676
2. Punjab States ..	638	..	638	226	+412	550	..	550	615	—65	+88	—389
ANDAMANS AND NICOBARS.	70	2	72	109	—37	1,754	35	1,789	2,072	—283	—1,717	—1,963
1. British Territory	70	2	72	109	—37	1,688	35	1,723	1,947	—224	—1,651	—1,838
2. Punjab States ..	..	..	..	..	..	66	..	66	125	—59	—66	—125
ASSAM ..	102	92	194	121	+73	3,088	96	3,184	2,973	+211	—2,990	—2,852
1. British Territory	84	92	176	98	+78	2,823	96	2,919	2,342	+577	—2,743	—2,244
2. Punjab States ..	18	..	18	23	—5	265	..	265	114	+151	—247	—91
BALUCHISTAN (DISTRICTS AND ADMINISTERED TERRITORIES).	3,547	42	3,589	3,662	—73	35,591	485	36,076	23,748	+12,328	—32,487	—20,086
1. British Territory	3,141	42	3,183	3,570	—387	34,314	485	34,799	22,983	+11,816	—31,616	—19,413
2. Punjab States ..	406	..	406	92	+314	1,277	..	1,277	765	+512	—871	—673
BENGAL ..	3,172	2,778	5,950	3,987	+1,963	15,754	1,882	17,636	18,523	—887	—11,686	—14,536
1. British Territory	2,948	2,778	5,726	3,752	+1,974	14,110	1,882	15,992	17,075	—1,083	—10,266	—13,323
2. Punjab States ..	224	..	224	235	—11	1,644	..	1,644	1,045	+599	—1,420	—810
BIHAR AND ORISSA ..	888	245	1,133	1,401	—268	6,718	541	7,259	4,423	+2,836	—6,126	—3,022
1. British Territory	860	245	1,105	1,147	—42	6,272	541	6,813	4,086	+2,727	—5,708	—2,939
2. Punjab States ..	28	..	28	254	—226	446	..	446	337	+109	—418	—83
BOMBAY ..	9,502	1,019	10,521	9,872	+649	*55,603	4,628	*60,231	52,795	+7,436	—49,710	—42,923
1. British Territory	6,677	1,019	7,696	6,282	+1,414	30,931	4,628	35,559	30,613	+4,946	—27,863	—24,331
2. Punjab States ..	2,825	..	2,825	3,590	—765	3,444	..	3,444	3,268	+176	—619	+322
BURMA ..	1,617	50	1,667	1,550	+117	20,938	727	21,665	26,100	—4,435	—19,998	—24,550
1. British Territory ..	1,451	50	1,501	1,412	+89	19,804	727	20,531	25,595	—5,064	—19,030	—24,183
2. Punjab States ..	166	..	166	138	+28	1,134	..	1,134	505	+629	—968	—367
CENTRAL PROVINCES AND BERAR.	2,177	268	2,445	1,497	+948	7,674	692	8,366	10,410	—2,044	—5,921	—8,913
1. British Territory	2,121	268	2,389	1,375	+1,014	7,259	692	7,951	9,480	—1,529	—5,562	—8,105
2. Punjab States ..	56	..	56	122	—66	415	..	415	930	—515	—359	—808
COORG ..	..	..	..	..	..	1	..	1	10	—9	—1	—10
1. British Territory ..	..	..	..	..	..	1	..	1	10	—9	—1	—10
2. Punjab States ..	..	..	..	..	..	..	..	..	..	..	..	..

SUBSIDIARY TABLE IV.

Migration between the Provinces of the Punjab and Delhi and other parts of India—*continued.*

Province or State.	Immigrants to Punjab.	Immigrants to Delhi.	Immigrants to Punjab and Delhi.			Emigrants from Punjab.	Emigrants from Delhi.	Emigrants from Punjab and Delhi.			Excess (+) or deficiency (—) of migration over emigration.	
	1921.	1921.	1921.	1911.	Variation.	1921.	1921.	1921.	1911.	Variation.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12	13
DELHI ..	35,165	..	..	..	..	*64,810	..	..	..	..	..	..
1. British Territory ..	32,305	..	..	..	..	60,741	..	..	..	..	..	..
2. Punjab States ..	2,860	..	..	..	..	4,029	..	..	..	..	..	..
MADRAS ..	1,583	553	2,136	1,083	+1,053	625	216	841	874	−33	+1,295	+209
1. British Territory ..	1,508	553	2,061	1,044	+1,017	625	216	841	874	−33	+1,220	+170
2. Punjab States ..	75	..	75	39	+36	..	..	..	..	..	+75	+39
N.W.F. PROVINCE (DISTRICTS AND ADMINISTERED TERRITORIES).	34,252	616	34,868	35,060	−192	76,936	1,651	78,587	65,220	+13,367	−43,719	−30,160
1. British Territory ..	33,838	616	34,454	34,521	−67	76,131	1,651	77,782	63,501	+14,281	−43,328	−28,980
2. Punjab States ..	414	..	414	539	−125	805	..	805	1,440	−635	−391	−901
PUNJAB ..	..	60,781	..	..	..	..	35,165	..	..	..	..	..
1. British Territory ..	..	60,781	..	..	..	..	32,305	..	..	..	..	..
2. Punjab States ..	..	..	..	..	..	..	2,860	..	..	..	..	..
UNITED PROVINCES OF AGRA AND OUDH.	192,689	74,140	266,829	218,390	+48,439	82,638	14,843	97,481	121,505	−24,024	+169,348	+96,885
1. British Territory ..	173,167	74,140	247,307	200,415	+46,892	77,761	14,843	92,604	115,702	−23,098	+154,703	+84,713
2. Punjab States ..	19,522	..	19,522	17,975	+1,547	4,877	..	4,877	5,803	−926	+14,645	+12,172
III.—FEUDATORY STATES. TOTAL ..	303,859	41,853	†341,183	326,422	+14,761	*154,741	5,973	*160,714	171,404	−10,690	+180,469	+155,018
1 Punjab States ..	75,182	..	75,182	68,515	+6,667	19,074	..	19,074	25,044	−5,970	+56,108	+43,471
2. British Territory ..	228,677	41,353	266,001	257,907	+8,094	132,693	5,973	138,666	141,242	−2,576	+127,335	+116,665
ASSAM STATES ..	302	..	302	31	+271	90	1	91	522	−431	+211	−491
1. Punjab States ..	..	..	..	1	−1	12	..	12	75	−63	−12	−74
2. British Territory ..	302	..	302	30	+272	78	1	79	427	−348	+223	−397
BALUCHISTAN AGENCY TRACTS.	20	..	20	42	−22	718	8	726	428	+298	−706	−386
1. Punjab States ..	..	..	..	12	−12	27	..	27	5	+22	−27	+7
2. British Territory ..	20	..	20	30	−10	691	8	699	423	+276	−679	−303
BARODA ..	97	22	119	225	−106	*745	159	*904	921	−17	−785	−696
1. Punjab States ..	13	..	13	47	−34	31	..	31	11	+20	−18	+36
2. British Territory ..	84	22	106	178	−72	136	159	295	910	−615	−189	−732
BENGAL STATES ..	..	..	..	82	−32	72	7	79	82	−3	−79	−50
1. Punjab States ..	..	..	..	4	−4	18	..	18	..	+18	−18	+4
2. British Territory ..	..	..	..	28	−28	54	7	61	55	+6	−61	−27
BIHAR AND ORISSA STATES.	6	1	7	44	−37	1,139	..	1,139	841	+298	−1,132	−797
1. Punjab States ..	..	..	..	..	..	133	..	133	45	+88	−133	−45
2. British Territory ..	6	1	7	44	−37	1,006	..	1,006	796	+210	−999	−752
BOMBAY STATES ..	485	217	702	711	−9	*1,862	287	*2,149	2,649	−500	−1,447	−1,938
1. Punjab States ..	41	..	41	145	−104	33	..	33	86	−53	+8	+59
2. British Territory ..	444	217	661	566	+95	367	287	654	832	−178	+7	−266
CENTRAL INDIA AGENCY	608	305	913	3,630	−2,717	5,420	1,054	6,474	8,282	−1,808	−5,561	−4,652
1. Punjab States ..	62	..	62	503	−441	208	..	208	423	−215	−146	+80
2. British Territory ..	546	305	851	3,127	−2,276	5,212	1,054	6,266	7,859	−1,593	−5,415	−4,732
CENTRAL PROVINCES STATES.	338	61	399	3	+396	1,971	89	2,060	1,245	+815	−1,661	−1,242
1. Punjab States ..	35	..	35	..	+35	89	..	89	396	−307	−54	−396
2. British Territory ..	303	61	364	3	+361	1,882	89	1,971	849	+1,122	−1,607	−846

SUBSIDIARY TABLE IV.

Migration between the Provinces of the Punjab and Delhi and other parts of India—*continued*.

Province or State.	Immigrants to Punjab.	Immigrants to Delhi.	Immigrants to Punjab and Delhi.			Emigrants from Punjab.	Emigrants from Delhi.	Emigrants from Punjab and Delhi.			Excess (+) or deficiency (—) of migration over emigration.	
	1921.	1921.	1921.	1911.	Variation.	1921.	1921.	1921.	1911.	Variation.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12	13
GWALIAR STATE ..	1,793	1,457	3,250	Not available.	Not available.	2,530	722	3,252	Not available.	..	—2	..
1. Punjab States ..	220	..	220			365	..	365		..	—145	..
2. British Territory ..	1,573	1,457	3,030			2,165	722	2,887		..	+143	..
HYDERABAD ..	1,115	351	1,466	689	+777	*1,618	1,112	*2,730	4,869	—2,139	—1,264	—4,180
1. Punjab States ..	142	..	142	123	+19	317	..	317	399	—82	—175	—276
2. British Territory ..	973	351	1,324	566	+758	455	1,112	1,567	2,214	—647	—243	—1,648
KASHMIR ..	75,159	185	75,344	72,369	+2,975	*52,427	..	*52,427	59,707	—7,280	+22,917	+12,662
1. Punjab States ..	3,387	..	3,387	2,658	+729	631	..	631	1,207	—576	+2,756	+1,451
2. British Territory ..	71,772	185	71,957	69,711	+2,246	51,767	..	51,767	58,500	—6,733	+20,190	+11,211
MADRAS STATES INCLUDING COCHIN AND TRAVANCORE.	39	6	45	27	+18	*53	..	*53	43	+10	—8	—16
1. Punjab States ..	..	..	..	..	..	2	..	2	1	+1	—2	—1
2. British Territory ..	39	6	45	27	+18	35	..	35	10	+25	+10	+17
COCHIN ..	33	3	36	2	+34	*7	..	*7	3	+4	+29	—1
1. Punjab States ..	..	..	..	..	..	..	..	..	Not available	..	..	..
2. British Territory ..	33	3	36	2	+34	..	..	..		..	+36	+2
TRAVANCORE ..	6	3	9	19	—10	*42	..	*42	39	+3	—33	—20
1. Punjab States ..	..	..	..	..	..	2	..	2	1	+1	—2	—1
2. British Territory ..	6	3	9	19	—10	35	..	35	9	+26	—26	+10
MYSORE ..	258	46	304	278	+31	956	260	1,216	1,662	—446	—912	—1,389
1. Punjab States ..	3	..	3	14	—11	16	..	16	18	—2	—13	—4
2. British Territory ..	255	46	301	259	+42	940	260	1,200	1,044	—444	—899	—1,385
N.-W. F. PROVINCE (AGENCIES AND TRIBAL AREAS).	..	..	..	211	—211	20,179	66	20,245	3,673	+16,572	—20,245	—3,462
1. Punjab States ..	..	..	..	19	—19	403	..	403	321	+82	—403	—302
2. British Territory ..	..	..	..	192	—192	19,776	66	19,842	3,281	+16,561	—19,842	—3,089
PUNJAB STATES ..	..	4,029	..	Not available	Not available	..	..	..	..	..	..	..
2. British Territory ..	..	4,029	..			..	..	..	..	..	..	..
RAJPUTANA AGENCY ..	222,173	33,729	255,902	246,609	+9,293	63,387	2,137	65,524	85,526	—20,002	+190,378	+161,083
1. Punjab States ..	70,814	..	70,814	64,422	+6,392	16,766	..	16,766	21,871	—5,105	+54,048	+42,551
2. British Territory ..	151,359	33,729	185,088	182,187	+2,901	46,621	2,137	48,758	62,674	—13,916	+136,330	+119,515
SIKKIM ..	..	..	..	3	—3	*43	..	*43	147	—104	—43	—144
1. Punjab States ..	..	..	..	..	..	..	..	..	9	—9	..	—9
2. British Territory ..	..	..	..	3	—3	..	..	..	138	—138	..	—137
UNITED PROVINCES STATES.	1,466	944	2,410	1,523	+887	1,531	71	1,602	807	+795	+808	+716
1. Punjab States ..	465	..	465	567	—102	23	..	23	177	—154	+442	+390
2. British Territory ..	1,001	944	1,945	956	+989	1,508	71	1,579	630	+949	+366	+326
INDIA UNSPECIFIED ..	1,581	225	1,806	1,155	+651	..	..	..	..	..	..	..
1. British Territory ..	1,554	225	1,779	1,140	+639	..	..	..	..	..	..	..
2. Punjab States ..	27	..	27	15	+12	..	..	..	..	..	..	..
FRENCH AND PORTUGUESE SETTLEMENTS.	145	43	188	100	+88	..	..	..	..	..	..	..
1. Punjab States ..	14	..	14	27	—13	..	..	..	..	..	..	..
2. British Territory ..	131	43	174	73	+101	..	..	..	..	..	..	..

SUBSIDIARY TABLE IV.

Migration between the Provinces of the Punjab and Delhi and other parts of India—*concluded.*

† Exclude immigrants from Punjab to Delhi and *vice versa*. *Include 24,242 persons of Punjab unspecified as below :—

Part II.		Part III.	
Bombay ..	21,228	Baroda ..	578
Delhi ..	40	Bombay ..	1,462
		Hyderabad ..	846
Total ..	21,268	Kashmir ..	29
		Madras ..	4
		Cochin ..	7
		Travancore ..	5
		Sikkim ..	43
		Total ..	2,974

§ Exclude emigrants from Punjab to Delhi and *vice versa*.
NOTE.—The emigrants from Punjab States (A and B) who specified their birth places are as below :—

Part II.	Punjab States (A).	Punjab States (B).	Part III.	Punjab States (A).	Punjab States (B).
Ajmer-Merwara	..	550	Baluchistan ..	..	27
Andamans and Nicobars	..	66	Baroda ..	..	12
Baluchistan ..	5	1,272	Bengal ..	17	1
Bengal ..	961	673	Bihar and Orissa ..	26	107
Bihar and Orissa ..	101	345	Bombay	..	33
Bombay ..	8	3,436	Central India Agency	5	203
Burma ..	142	992	Central Provinces ..	2	87
Central Provinces and Berar	..	415	Gwalior ..	..	365
N.-W. F. Province ..	..	805	Hyderabad ..	1	316
United Provinces ..	..	4,496	Kashmir ..	..	631
			Travancore ..	..	2
			Mysore ..	..	3
Total ..	1,217	13,050	N.-W. F. Province ..	..	403
			Rajputana	69	16,697
			United Provinces States	..	23
			Total ..	120	18,910

SUBSIDIARY TABLE V.

Showing calculated annual number of persons travelling between districts in the Punjab in the Decade 1911—1921, as affecting the number of foreign born in each District, *i. e.*, of persons who made the journey one way only.

Divisions.	Number.	Districts to → from ↓	Hissar.	Rohtak.	Gurgaon.	Karnal.	Ambala.	Simla.	Kangra.	Hoshiarpur.	Jullundur.	Ludhiana.	Ferozepore.	Lahore.	Amritsar.	Gurdaspur.	Sialkot.	Gujranwala.	Sheikhupura.	Gujrat.	Shahpur.	Jhelum.	Rawalpindi.	Attock.	Mianwali.	Montgomery.	Lyallpur.	Jhang.	Multan.	Muzaffargarh.	Dera Ghazi Khan	Total.
			Ambala Division.						*Jullundur Division.*					*Lahore Division.*						*Rawalpindi Division.*						*Multan Division.*						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
AMBALA DIVISION.	1	Hissar ..	0	379	60	260	28	2	—	33	17	159	1,258	96	18	4	12	8	124	—	—	—	7	3	4	77	29	—	11	0	—	2,589
	2	Rohtak ..	—	0	68	933	6	—	—	10	11	9	49	19	10	4	30	—	35	—	—	—	—	3	14	2	8	—	4	1	—	1,216
	3	Gurgaon ..	81	359	0	25	6	1	—	2	5	9	82	77	29	—	—	24	84	15	—	—	14	7	10	—	6	—	34	—	—	870
	4	Karnal ..	—	640	2	0	178	—	—	4	20	34	12	26	29	13	—	—	8	24	—	—	2	2	2	7	—	2	21	0	0	1,026
	5	Ambala ..	—	6	5	119	0	7	2	18	41	174	16	109	23	36	—	—	97	—	1	2	4	4	4	100	290	1	73	1	—	1,133
	6	Simla ..	1	1	0	2	23	0	—	25	8	2	3	8	6	—	—	—	2	—	—	—	10	1	—	0	—	0	5	—	—	97
JULLUNDUR DIVISION	7	Kangra ..	0	—	1	1	8	—	0	273	26	11	25	289	72	104	0	2	20	—	—	—	42	29	1	6	—	1	—	0	0	911
	8	Hoshiarpur ..	1	4	0	5	68	—	77	0	896	106	23	460	134	126	—	—	992	24	—	—	69	9	3	1,170	958	29	82	—	2	5,238
	9	Jullundur ..	—	2	3	3	25	21	15	602	0	225	199	345	147	66	8	—	1,460	—	—	—	79	1	4	2,089	1,081	20	328	—	24	6,837
	10	Ludhiana ..	—	—	—	—	26	2	—	31	198	0	199	58	19	25	6	—	86	1	—	—	16	2	—	189	—	—	93	—	6	957
	11	Ferozepore ..	—	2	12	12	19	3	—	7	127	307	0	58	122	12	—	—	193	3	—	—	13	—	0	578	40	—	217	2	—	1,787
LAHORE DIVISION.	12	Lahore ..	—	—	1	37	21	—	0	—	42	18	107	0	445	70	—	—	2,216	34	—	—	25	16	8	1,423	—	7	60	2	—	4,592
	13	Amritsar ..	0	1	—	—	42	13	2	—	13	30	1	410	0	467	21	—	2,221	4	—	—	45	11	2	608	1,282	—	360	—	—	5,545
	14	Gurdaspur ..	2	0	2	2	6	4	33	63	26	3	9	467	837	0	104	—	1,663	8	—	—	32	3	1	784	—	—	252	—	0	4,301
	15	Sialkot ..	1	—	4	—	—	5	13	—	26	7	31	343	100	295	0	—	3,533	644	—	—	172	9	15	—	119	10	187	—	—	5,514
	16	Gujranwala ..	—	4	0	1	6	6	2	2	16	6	19	—	28	43	—	0	4,031	458	—	—	19	17	—	197	—	—	54	—	—	4,909
	17	Sheikhupura ..	0	0	0	1	2	0	0	3	2	0	7	985	19	9	35	561	0	16	2	1	1	0	1	13	254	1	3	1	0	1,917
RAWALPINDI DIVISION.	18	Gujrat ..	2	2	1	1	18	5	—	—	5	5	11	266	11	50	135	190	625	0	—	33	203	13	—	231	—	87	31	—	—	1,925
	19	Shahpur ..	1	—	1	0	1	1	—	0	4	4	28	22	7	8	30	—	127	820	0	1	43	—	22	215	—	—	40	—	—	1,384
	20	Jhelum ..	—	1	—	—	10	3	1	—	3	—	27	103	23	7	26	6	90	808	289	0	203	—	6	189	—	12	19	—	—	1,910
	21	Rawalpindi ..	1	2	1	—	—	1	—	0	18	—	—	58	33	17	38	1	41	8	—	—	0	—	0	73	123	1	57	1	—	474
	22	Attock ..	—	0	—	—	3	1	0	—	1	2	1	29	6	3	12	11	26	27	73	—	181	0	48	20	10	54	144	0	2	654
	23	Mianwali ..	—	1	—	0	—	0	—	1	—	0	0	4	—	—	4	11	17	16	95	2	20	7	0	3	29	61	360	41	—	672
MULTAN DIVISION.	24	Montgomery ..	—	0	3	1	4	0	1	117	22	—	112	—	14	8	7	—	2,748	5	1	0		1	—	0	—	—	126	—	4	[illegible]177
	25	Lyallpur ..	—	2	1	1	30	1	2	80	130	112	38	257	198	125	109	—	1,070	75	3	6		2	—	1,187	0	124	300	1	[illegible]	4,179
	26	Jhang ..	—	—	0	0	6	1	—	5	—	—	—	52	—	0	—	12	129	66	—	2		0	—	278	991	0	521	—	—	2,062
	27	Multan ..	2	2	—	8	8	5	—	6	10	1	14	138	26	11	3	9	39	5	30	3	6	2	1	440	—	—	0	[illegible]	115	881
	28	Muzaffargarh	2	—	—	—	—	0	—	—	4	2	6	74	—	1	7	0	10	10	9	6	4	—	28	53	—	—	[illegible]4	0	—	420
	29	Dera Ghazi Khan	1	1	0	1	—	—	—	—	1	1	2	23	1	—	21	2	3	1	—	3	14	—	7	12	5	—	51	16	0	166
		Total ..	93	1,109	165	1,413	514	82	148	1,372	1,081	1,293	2,339	4,776	2,357	1,504	608	837	21,090	3,072	503	59	1,331	142	18[illegible]	10,242	5,225	410	3,052	66	150	67,352

SUBSIDIARY TABLE VI.

Showing the details of emigrants enumerated outside the Punjab and Delhi.

Serial No.	Province where enumerated.	Province where born.					
		Punjab.			*Delhi.*		
		Persons.	Males.	Females.	Persons.	Males.	Females.
	1	2	3	4	5	6	7
	PROVINCES AND STATES IN INDIA BEYOND THE PROVINCE	466,089	295,173	170,916	34,010	18,187	15,823
	(A).—PROVINCES AND STATES ADJACENT TO THE PROVINCE	333,407	195,481	137,926	19,261	7,823	11,438
	(I).—British Territory	195,165	128,740	66,425	16,979	6,608	10,371
1	Baluchistan	35,591	29,115	6,476	485	371	114
2	N.-W. F. Province (Districts and administered Territories)	76,936	56,344	20,592	1,651	1,569	82
3	U. P. of Agra and Oudh	82,638	43,281	39,357	14,843	4,668	10,175
	(II).—Feudatory States	138,242	66,741	71,501	2,282	1,215	1,067
4	Baluchistan States	718	502	216	8	6	2
5	N.-W. F. Province (Agencies and Tribal areas) ..	20,179	19,970	209	66	66	..
6	United Provinces States	1,531	1,180	351	71	45	26
7	Kashmir	52,427	23,420	29,007	..	..	..
8	Rajputana Agency	63,387	21,669	41,718	2,137	1,098	1,039
	(B).—OTHER PROVINCES AND STATES IN INDIA	132,682	99,692	32,990	14,749	10,364	4,385
	(I).—British Territory	116,183	88,440	27,743	11,058	7,723	3,335
9	Ajmer-Merwara	4,028	2,935	1,093	2,241	1,541	700
10	Andamans and Nicobars	1,754	1,620	134	35	28	7
11	Assam	3,088	2,219	869	96	78	18
12	Bengal	15,754	12,027	3,727	1,882	1,099	783
13	Bihar and Orissa	6,718	4,842	1,876	541	387	154
14	Bombay Presidency	55,603	41,764	13,839	4,628	3,504	1,124
15	Burma	20,938	17,423	3,515	727	635	92
16	Central Provinces and Berar	7,674	5,270	2,404	692	361	331
17	Coorg	1	1	..	..	..	..
18	Madras Presidency	625	339	286	216	90	126
	(II).—Feudatory States	16,499	11,252	5,247	3,691	2,641	1,050
19	Assam States	90	70	20	1	1	..
20	Baroda State	745	557	188	159	118	41
21	Bengal States	72	34	38	7	6	1
22	Bihar and Orissa States	1,139	796	343	..	..	..
23	Bombay States	1,862	1,447	415	287	242	45
24	Central India Agency	5,420	3,475	1,945	1,054	656	398
25	Central Provinces States	1,971	1,321	650	89	53	36
26	Gwalior State	2,530	1,661	869	722	598	124
27	Hyderabad State	1,618	1,159	459	1,112	808	304
28	Madras States	4	2	2	..	..	..
29	Cochin State	7	5	2	..	..	..
30	Travancore State	42	24	18	..	..	..
31	Mysore State	956	678	278	260	159	101
32	Sikkim	43	23	20	..	..	..

SUBSIDIARY TABLE VI—*concluded.*

Showing the details of emigrants enumerated outside the Punjab and Delhi.

Serial No.	Province where enumerated.	Province where born.					
		Punjab.			*Delhi.*		
		Persons.	Males.	Females.	Persons.	Males.	Females.
	1	2	3	4	5	6	7
	OTHER ASIATIC COUNTRIES	12,527	10,940	1,587	21	17	4
33	Ceylon	174	121	53	21	17	4
34	Cyprus	122	114	8	..	..	..
35	Hong-kong	1,192	1,038	154	..	..	..
36	Federated Malaya States	7,789	6,693	1,096	..	..	..
37	Unfederated Malaya States (Johore, Kedah, Kelantan, Trengganu and Brunei)	1,373	1,281	92	..	..	..
38	Straits Settlements	1,877	1,693	184	..	..	..
	AFRICA	5,511	4,501	1,010	2	2	..
39	Kennya	4,823	3,866	957	..	..	..
40	Nyasaland	20	17	3	..	..	..
41	Somaliland Protectorate	125	122	3	..	..	..
42	Southern Rhodesia	15	15	..	..	..	..
43	Sudan	16	16	..	..	..	..
44	Tonganika Territory	326	299	27	2	2	..
45	Union of South Africa	186	166	20	..	..	..
	AUSTRALASIA	449	405	44	..	..	..
46	Fiji	449	405	44	..	..	..
	Grand Total	484,576	311,019	173,557	34,033	18,206	15,827

NOTE—1,032 emigrants from the Punjab were reported as having embarked at Calcutta during the decade 1911-1920.

SUBSIDIARY TABLE VII.

Migration to the Canal Colonies, 1911 and 1921.

District.	Balance of Migration 1911. Lyallpur.	Shahpur.	Gujranwala.	Multan.	Montgomery.	Jhang.	All Colonies.
Lyallpur	X	−3,312	−22,500	−8,294	−62,889	−29,180	−126,175
Shahpur	3,312	X	−9,144	854	509	−16,104	−20,573
Gujranwala	22,500	9,144	X	1,038	−1,513	537	31,706
Multan	8,294	−854	−1,038	X	−1,151	−17,228	−11,977
Montgomery	62,889	−509	1,513	1,151	X	−186	64,858
Jhang	29,180	16,104	−537	17,228	186	X	62,161
Total	126,175	20,573	−31,706	11,977	−64,858	−62,161	0
Sialkot	71,128	28,865	30,363	1,987	1,271	893	134,507
Amritsar	69,754	5,849	10,864	4,263	2,564	313	93,607
Jullundur	63,696	1,854	7,512	1,237	600	319	75,218
Gurdaspur	42,965	1,610	9,924	2,066	697	282	57,544
Gujrat	15,633	26,871	12,503	1,010	427	683	57,127
Hoshiarpur	38,061	1,653	6,100	1,659	567	270	48,310
Ludhiana	27,461	1,610	447	265	301	86	30,170
Lahore	20,589	−113	−2,995	3,592	742	−334	21,481
Jhelum	3,205	13,212	79	1,896	246	490	19,128
Ambala	16,797	203	248	189	174	15	17,626
Ferozepore	9,404	543	148	278	−703	19	9,689
Mianwali	4,905	509	−99	575	307	316	6,513
Muzaffargarh	1,557	−295	−186	4,095	33	−905	4,299
Hissar	1,566	380	286	191	1,029	−2	3,159
Kangra	1,477	43	98	319	124	28	2,089
Rohtak	530	457	274	131	413	30	1,835
Gurgaon	344	264	294	164	599	13	1,678
Rawalpindi	2,229	41	−1,651	488	445	71	1,623
Karnal	416	711	101	81	242	23	1,574
D. G. Khan	120	−162	−27	1,320	275	21	1,547
Attock	493	−340	0	649	67	45	914
Simla	44	−12	−11	43	13	−12	65
Total	392,374	83,762	74,272	26,498	10,433	2,664	590,003

District.	Balance of Migration 1921. Lyallpur.	Shahpur.	Gujranwala and Sheikhupura.	Multan.	Montgomery.	Jhang.	All Colonies.
Lyallpur	X	−2,596	−9,022	−2,225	−33,401	−31,226	−78,469
Shahpur	2,596	X	−1,961	856	2,339	−7,073	−3,243
Gujranwala	9,022	1,961	X	917	−22,195	−1,[illegible]63	−11,558
Multan	2,225	−856	−917	X	1,934	−18,82[illegible]	−16,442
Montgomery	33,401	−2,339	22,195	−1,934	X	−2,726	48,597
Jhang	31,226	7,073	1,263	18,828	2,726	X	61,115
Total	78,469	3,243	11,558	16,442	−48,597	−61,115	0
Sialkot	56,990	15,595	54,465	3,271	9,082	840	140,243
Jullundur	59,524	834	13,474	3,888	19,279	441	97,440
Amritsar	55,661	2,276	20,815	6,509	7,252	198	92,711
Hoshiarpur	38,428	752	9,281	2,016	11,022	435	61,934
Gurdaspur	32,576	1,138	15,451	3,846	7,608	218	60,837
Gujrat	10,678	2,851	13,109	1,048	2,397	733	30,816
Lahore	11,121	−776	2,800	2,161	14,236	−673	28,869
Ludhiana	20,863	577	814	1,044	1,957	63	25,318
Jhelum	2,457	14,000	1,137	1,063	1,916	480	21,653
Ambala	15,805	165	866	747	1,005	−26	18,562
Ferozepore	7,541	−71	1,154	2,060	3,668	87	14,439
Mianwali	4,207	1,470	193	3,724	283	914	10,791
Muzaffargarh	516	−58	9	5,858	519	−572	6,272
Hissar	1,526	57	1,457	238	1,568	3	4,849
Attock	467	683	123	1,746	233	523	3,775
Rawalpindi	2,680	−490	−1,119	788	988	48	2,895
Gurgaon	325	33	1,213	496	426	2	2,495
Rohtak	476	38	409	126	348	0	1,397
Kangra	226	14	471	119	149	30	1,009
Karnal	289	14	73	180	249	37	842
D. G. Khan	115	−119	28	476	294	25	819
Simla	1	−18	−51	28	12	−14	−42
Total	322,472	38,965	130,172	42,032	81,401	3,792	627,924

SUBSIDIARY TABLE VII.
Migration to the Canal Colonies, 1911 and 1921.

SUBSIDIARY TABLE VII.

Migration to the Canal Colonies, 1911 and 1921.

	Change in the balance of Migration, 1911 and 1921.								Difference in balance due to migration of decade.						
Lyallpur	X	716	13,458	6,069	29,488	−2,045	47,686	Lyallpur	X	54	8,958	4,410	16,910	−7,881	22,451
Shahpur	−716	X	7,183	2	1,830	9,031	17,330	Shahpur	−54	X	5,354	173	1,932	5,810	13,215
Gujranwala	−13,458	−7,183	X	−121	−20,682	−1,800	−43,244	Gujranwala	−8,958	−5,354	X	87	−20,985	−1,693	−36,903
Multan	−6,069	−2	121	X	3,085	−1,600	−4,465	Multan	−4,410	−173	−87	X	2,855	−5,040	−6,861
Montgomery	−29,488	−1,830	20,682	−3,085	X	−2,510	−16,261	Montgomery	−16,910	−1,932	20,985	−2,855	X	−2,577	−3,289
Jhang	2,045	−9,031	1,800	1,600	2,510	X	−1,046	Jhang	7,881	−5,810	1,693	5,040	2,577	X	11,387
Total	−47,686	−17,330	43,244	4,465	16,261	1,046	0	Total	−22,451	−13,215	36,903	6,861	3,289	−11,387	0
Jullundur	−4,172	−1,020	5,953	2,651	18,679	122	22,213	Jullundur	8,567	−649	7,455	2,898	18,799	186	37,256
Hoshiarpur	367	−901	3,181	357	10,455	165	13,624	Sialkot	88	−7,497	30,175	1,681	8,065	120	32,638
Lahore	−9,468	−663	5,795	−1,431	13,494	−339	7,388	Hoshiarpur	7,979	−570	4,401	689	10,568	219	23,286
Sialkot	−14,138	−13,270	24,102	1,284	7,811	−53	5,736	Amritsar	−142	−2,403	12,124	3,099	5,199	−52	17,825
Ferozepore	−1,863	−614	1,006	1,782	4,371	68	4,750	Gurdaspur	−1,796	−150	7,512	2,193	7,050	−8	14,801
Mianwali	−698	961	292	3,149	−24	598	4,278	Lahore	−5,350	−686	5,196	−713	13,642	−400	11,683
Gurdaspur	−10,389	−472	5,627	1,780	6,011	−64	3,293	Ferozepore	18	−505	1,036	1,838	4,230	72	6,689
Attock	−26	1,023	95	1,097	166	478	2,833	*Jhelum*	−107	3,430	855	146	1,719	88	6,131
Jhelum	−718	788	839	−233	1,670	−10	2,306	Mianwali	283	1,063	272	3,264	37	661	5,580
Muzaffargarh	−1,041	237	195	1,763	486	333	1,973	Ambala	2,367	3	668	596	866	−38	4,462
Hissar	−40	−332	1,171	47	539	5	1,390	Attock	73	955	95	1,227	179	487	3,016
Rawalpindi	451	−531	532	300	543	−23	1,272	Muzaffargarh	−730	178	158	2,582	193	152	2,833
Ambala	−992	−38	618	358	831	−41	936	Hissar	273	−254	1,228	85	745	5	2,082
Gurgaon	−19	−231	919	332	−173	−11	817	Rawalpindi	897	−523	202	398	632	−9	1,597
Simla	−43	−6	−40	−15	−1	−2	−107	Ludhiana	−1,106	−711	456	832	1,716	−6	1,181
Rohtak	−54	−419	135	−5	−65	−30	−438	Gurgaon	50	−178	978	365	−53	−8	1,154
D. G. Khan	−5	43	55	−844	19	4	−728	Rohtak	52	−328	190	21	18	−24	−71
Karnal	−127	−697	−28	99	7	14	−732	Simla	−34	−8	−42	−6	2	−4	−92
Amritsar	−14,093	−3,573	9,951	2,246	4,688	−115	−896	D. G. Khan	19	11	50	−580	74	8	−418
Kangra	−1,251	−29	159	−200	25	2	−1,294	Karnal	−44	−555	−8	115	55	19	−418
Ludhiana	−6,598	−1,033	367	779	1,656	−23	−4,852	Kangra	−956	−20	179	−136	50	8	−875
Gujrat	−1,955	−24,020	606	38	1,970	50	−26,311	Gujrat	−1,828	−18,646	3,107	240	2,055	187	−14,885
Total	−69,902	−44,797	61,430	15,534	74,058	1,128	37,451	Total	8,573	−28,043	76,287	20,834	76,141	1,663	155,455

SUBSIDIARY TABLE VIII.

Showing the Birth-place of persons according to Tahsil or State of Enumeration.

District.	Tahsil.	Number of persons enumerated in Tahsil.	Persons born in — District of enumeration.	Persons born in — Contiguous Districts or States.	Persons born in — Non-contiguous Districts or States in the Punjab.	Persons born in — Outside the Punjab.
1	2	3	4	5	6	7
	PUNJAB	**25,101,060**	***21,580,442**	..	..	**627,137**
	British Territory	**20,685,024**	***17,850,279**	...	..	**522,323**
HISSAR.	Hissar	136,272	123,919	3,656	1,885	6,812
	Hansi	177,043	159,899	12,357	2,146	2,641
	Bhiwani	126,015	105,620	10,062	2,147	8,186
	Fatehabad	195,801	173,473	14,738	2,636	4,954
	Sirsa	181,679	153,232	12,142	2,326	13,979
	Total	**816,810**	**716,143**	**52,955**	**11,140**	**36,572**
ROHTAK.	Rohtak	200,939	178,786	12,502	1,440	8,211
	Jhajjar	213,866	184,729	18,436	2,855	7,846
	Gohana	175,291	154,215	16,691	729	3,656
	Sonepat	182,176	159,572	7,073	548	14,983
	Total	**772,272**	**677,302**	**54,702**	**5,572**	**34,696**
GURGAON.	Gurgaon	111,980	96,543	4,939	1,203	9,295
	Ferozepur Jhirka	98,285	82,913	97	106	15,169
	Nuh	112,119	102,937	520	116	8,546
	Palwal	131,760	110,308	246	453	20,753
	Rewari	147,256	121,231	8,329	4,213	13,483
	Ballabgarh	80,603	69,758	239	176	10,430
	Total	**682,003**	**583,690**	**14,370**	**6,267**	**77,676**
KARNAL.	Karnal	232,607	213,050	5,443	2,072	12,042
	Panipat	173,796	149,658	15,102	1,237	7,799
	Kaithal	275,722	242,717	23,287	5,991	3,727
	Thanesar	146,601	124,750	16,326	1,435	4,090
	Total	**828,726**	**730,175**	**60,158**	**10,735**	**27,658**
AMBALA.	Ambala	187,926	143,604	19,597	7,078	17,647
	Kharar	142,894	123,117	13,706	2,425	3,646
	Jagadhri	126,704	109,230	8,655	651	8,168
	Naraingarh	107,798	102,108	4,533	283	874
	Rupar	116,155	103,504	10,788	1,384	479
	Total	**681,477**	**581,563**	**57,279**	**11,821**	**30,814**
SIMLA.	Simla	35,003	21,440	1,050	6,117	6,396
	Kot Khai	10,324	9,976	10	237	101
	Total	**45,327**	**31,416**	**1,060**	**6,354**	**6,497**
KANGRA.	Kangra	118,374	112,738	3,559	608	1,469
	Dehra	124,638	119,259	4,564	319	496
	Hamirpur	168,504	160,926	6,579	551	448
	Nurpur	95,470	86,656	7,579	351	884
	Pâlampur	137,052	134,699	2,032	160	161
	Kulu	122,027	117,367	3,232	331	1,097
	Total	**766,065**	**731,645**	**27,545**	**2,320**	**4,555**
HOSHIARPUR.	Hoshiarpur	247,196	230,762	12,964	2,708	762
	Dasuya	215,600	201,015	12,784	1,595	206
	Garhshankar	232,772	215,136	15,629	1,528	479
	Una	231,851	218,425	11,394	1,562	470
	Total	**927,419**	**865,338**	**52,771**	**7,393**	**1,917**
JULLUNDUR.	Jullundur	289,396	248,385	28,760	8,241	4,010
	Nakodar	190,650	177,353	10,886	2,183	228
	Phillaur	164,806	153,485	9,051	1,974	296
	Nawashahr	177,692	153,604	21,355	2,249	484
	Total	**822,544**	**732,827**	**70,052**	**14,647**	**5,018**

* These figures represent persons born in the districts where they were enumerated.

SUBSIDIARY TABLE VIII—*continued*.

Showing the Birth-place of persons according to Tahsil or State of Enumeration.

District.	Tahsil.	Number of persons enumerated in Tahsil.	Persons born in — District of enumeration.	Persons born in — Contiguous Districts or States.	Persons born in — Non-contiguous Districts or States in the Punjab.	Persons born in — Outside the Punjab.
1	2	3	4	5	6	7
LUDHIANA.	Ludhiana	285,953	238,946	37,992	5,744	3,271
	Jagraon	164,553	140,383	20,267	2,533	1,370
	Samrala	117,116	95,651	19,412	1,294	759
	Total	567,622	474,980	77,671	9,571	5,400
FEROZEPORE.	Ferozepore	221,737	173,380	29,708	8,060	10,589
	Zira	166,373	152,399	12,934	817	223
	Moga	209,558	180,372	25,238	2,598	1,350
	Muktsar	209,645	174,999	25,466	3,152	6,028
	Fazilka	290,935	212,100	41,876	3,143	33,816
	Total	1,098,248	893,250	135,222	17,770	52,006
LAHORE.	Lahore	515,613	355,473	45,265	72,660	42,215
	Chunian	295,509	260,870	25,364	6,123	3,152
	Kasur	320,214	278,636	28,720	7,900	4,958
	Total	1,131,336	894,979	99,349	86,683	50,325
AMRITSAR.	Amritsar	450,760	390,607	35,167	17,264	7,722
	Tarn Taran	294,465	267,716	20,993	4,562	1,194
	Ajnala	184,149	165,237	16,919	1,481	512
	Total	929,374	823,560	73,079	23,307	9,428
GURDASPUR.	Gurdaspur	234,146	222,169	7,592	3,065	1,320
	Batala	275,695	245,995	23,511	4,685	1,504
	Pathankot	129,502	110,752	9,579	1,506	7,665
	Shakargarh	212,849	195,700	10,186	935	6,028
	Total	852,192	774,616	50,868	10,191	16,517
SIALKOT.	Sialkot	290,469	263,998	6,887	5,093	14,491
	Pasrur	140,788	135,906	3,270	1,047	565
	Zafarwal	158,936	148,940	5,691	938	3,367
	Raya	196,936	182,351	11,616	2,382	587
	Daska	150,694	138,377	10,241	1,316	760
	Total	937,823	869,572	37,705	10,776	19,770
GUJRANWALA.	Gujranwala	294,567	249,838	35,176	5,744	3,809
	Wazirabad	146,248	124,536	17,369	2,184	2,159
	Hafizabad	182,766	168,563	10,991	2,009	1,203
	Total	623,581	542,937	63,536	9,937	7,171
SHEIKHUPURA.	Khangah Dogran	267,674	148,829	53,454	61,938	3,453
	Sharakpur	255,461	165,965	33,550	51,299	4,647
	Total	523,135	314,794	87,004	113,237	8,100
GUJRAT.	Gujrat	295,551	283,983	6,460	1,772	3,336
	Kharian	250,201	240,883	3,811	1,020	4,487
	Phalia	278,294	242,894	27,395	3,656	4,340
	Total	824,046	767,760	37,666	6,448	12,172
SHAHPUR.	Shahpur	137,899	132,877	3,232	1,171	616
	Khushab	168,718	164,383	3,273	453	609
	Bhalwal	220,951	186,388	27,839	5,494	1,230
	Sargodha	192,350	152,960	14,639	21,280	3,271
	Total	719,918	636,608	49,183	28,401	5,726

SUBSIDIARY TABLE VIII—*continued.*

Showing the Birth-place of persons according to Tahsil or State of Enumeration.

District.	Tahsil.	Number of persons enumerated in Tahsil.	Persons born in			
			District of enumeration.	Contiguous Districts and States.	Non-contiguous Districts and States in the Punjab.	Outside the Punjab.
1	2	3	4	5	6	7
JHELUM.	Jhelum	173,122	157,247	7,410	3,200	5,265
	Pind Dadan Khan	143,338	137,450	3,640	1,236	1,012
	Chakwal	160,608	156,509	2,970	376	753
	Total	**477,068**	**451,206**	**14,020**	**4,812**	**7,030**
RAWALPINDI.	Rawalpindi	262,656	195,076	11,655	21,671	34,254
	Gujar Khan	148,837	140,541	4,510	1,111	2,675
	Murree	60,969	56,662	153	612	3,542
	Kahuta	96,762	94,047	215	142	2,358
	Total	**569,224**	**486,326**	**16,533**	**23,536**	**42,829**
ATTOCK.	Attock	173,472	163,415	2,129	2,390	5,538
	Pindigheb	120,097	118,456	752	237	652
	Talagang	108,501	106,227	2,053	108	113
	Fatehjang	110,179	107,321	2,223	138	497
	Total	**512,249**	**495,419**	**7,157**	**2,873**	**6,800**
MIANWALI.	Mianwali	147,553	140,650	2,295	1,705	2,903
	Bhakkar	147,121	142,858	1,191	434	2,638
	Isa Khel	63,531	59,879	329	755	2,568
	Total	**358,205**	**343,387**	**3,815**	**2,894**	**8,109**
MONTGOMERY.	Montgomery	222,675	135,284	27,007	53,623	6,761
	Okara	148,716	106,524	20,964	18,098	3,130
	Dipalpur	200,978	183,535	12,139	4,517	787
	Pakpattan	141,417	132,640	5,173	2,673	931
	Total	**713,786**	**557,983**	**65,283**	**78,911**	**11,609**
LYALLPUR.	Lyallpur	344,852	180,808	30,580	129,834	3,630
	Samundri	224,806	134,813	30,530	58,207	1,256
	Toba Tek Singh	232,426	104,250	30,201	95,088	2,887
	Jaranwala	177,379	85,103	32,842	56,666	2,768
	Total	**979,463**	**504,974**	**124,153**	**339,795**	**10,541**
JHANG.	Jhang	232,570	227,500	3,002	1,487	581
	Chiniot	211,188	201,930	5,754	2,749	755
	Shorkot	126,801	119,811	3,826	2,455	709
	Total	**570,559**	**549,241**	**12,582**	**6,691**	**2,045**
MULTAN.	Multan	243,385	214,998	6,471	14,170	7,746
	Shujabad	132,091	129,037	1,922	583	549
	Lodhran	125,353	123,066	1,165	472	650
	Mailsi	113,927	108,821	3,230	806	1,070
	Khanewal	127,131	83,754	14,428	26,455	2,494
	Kabirwala	148,377	128,352	15,824	3,760	441
	Total	**890,264**	**788,028**	**43,040**	**46,246**	**12,950**
MUZAFFARGARH.	Muzaffargarh	178,579	170,919	6,115	879	666
	Alipur	146,711	141,711	3,848	494	658
	Sanawan	108,970	106,240	2,237	202	291
	Leiah	134,218	128,995	4,124	178	921
	Total	**568,478**	**547,865**	**16,324**	**1,753**	**2,536**
DERA GHAZI KHAN.	Dera Ghazi Khan	193,789	186,763	1,055	2,635	3,336
	Sanghar	84,759	82,241	604	35	1,879
	Rajanpur	105,008	102,390	1,841	385	392
	Jampur	85,496	84,658	407	183	248
	Biloch transfrontier tract	26,758	26,643	..	114	1
	Total	**495,810**	**482,695**	**3,907**	**3,352**	**5,856**

SUBSIDIARY TABLE VIII—*concluded.*

Showing the Birth-place of persons according to Tahsil or State of Enumeration.

State.	Number of persons enumerated in State.	Persons born in			
		State of enumeration.	Contiguous Districts or States.	Non-Contiguous Districts or States in the Punjab.	Outside the Punjab.
1	2	3	4	5	6
PUNJAB STATES	4,416,036	*3,730,163	..	..	104,814
Dujana	25,833	19,032	4,755	1,233	813
Pataudi	18,097	12,363	3,509	611	1,614
Kalsia	57,371	38,581	14,666	2,204	1,920
Bashahr	90,366	85,172	4,772	331	91
Nalagarh	46,868	42,168	3,710	953	37
Keonthal	47,455	21,867	23,290	814	1,484
Baghal	26,099	23,554	1,128	383	34
Jubbul	25,752	22,258	2,861	240	393
Other Sim'a Hill States	71,178	62,618	5,788	2,113	659
Loharu	20,621	19,060	594	275	692
Nahan	140,448	125,898	8,080	3,988	2,482
Bilaspur	93,000	88,021	7,534	2,393	52
Mandi	185,048	175,483	7,321	1,300	944
Suket	54,328	52,736	1,048	463	81
Kapurthala	284,275	235,704	43,596	3,963	1,012
Malerkotla	80,322	65,624	12,427	1,898	373
Faridkot	150,661	108,169	31,439	8,069	2,984
Chamba	141,867	136,683	1,779	848	2,557
Patiala	1,499,739	1,265,822	183,780	13,277	36,860
Jind	308,183	232,389	60,515	5,585	9,694
Nabha	263,334	199,780	48,732	4,895	9,927
Bahawalpur	781,191	697,181	31,164	22,735	30,111

* These figures represent persons born in the states where they were enumerated.

SUBSIDIARY TABLE IX.

Showing the percentages based on Subsidiary Table VIII.

District.	Tahsil.	Number of persons enumerated in Tahsil.	Persons born in			
			District of enumeration.	Contiguous Districts or States.	Non-contiguous Districts or States in the Punjab.	Outside the Punjab.
1	2	3	4	5	6	7
	PUNJAB ..	..	85·9	..	..	2·5
	British Territory ..	..	86·3	..	..	2·5
HISSAR.	Hissar ..	100	90·94	2·68	1·38	5·00
	Hansi ..	100	90·32	6·98	1·21	1·49
	Bhiwani ..	100	83·82	7·98	1·70	6·50
	Fatehabad ..	100	88·60	7·52	1·35	2·53
	Sirsa ..	100	84·34	6·68	1·28	7·70
	Total ..	100	87·68	6·48	1·36	4·48
ROHTAK.	Rohtak ..	100	88·97	6·22	·72	4·09
	Jhajjar ..	100	86·38	8·62	1·33	3·67
	Gohana ..	100	87·98	9·52	·42	2·08
	Sonepat ..	100	87·59	3·88	·30	8·23
	Total ..	100	87·70	7·09	·72	4·49
GURGAON.	Gurgaon ..	100	86·22	4·41	1·07	8·30
	Ferozepur-Jhirka ..	100	84·36	·10	·11	15·43
	Nuh ..	100	91·81	·47	·10	7·62
	Palwal ..	100	83·72	·19	·34	15·75
	Rewari ..	100	82·33	5·65	2·86	9·16
	Ballabgarh ..	100	86·55	·30	·21	12·94
	Total ..	100	85·58	2·11	·92	11·39
KARNAL.	Karnal ..	100	91·59	2·34	·89	5·18
	Panipat ..	100	86·11	8·69	·71	4·49
	Kaithal ..	100	88·03	8·45	2·17	1·35
	Thanesar ..	100	85·10	11·14	·98	2·78
	Total ..	100	88·11	7·26	1·30	3·33
AMBALA.	Ambala ..	100	76·42	10·43	3·76	9·39
	Kharar ..	100	86·16	9·59	1·70	2·55
	Jagadhri ..	100	86·21	6·83	·51	6·45
	Naraingarh ..	100	94·72	4·21	·26	·81
	Rupar ..	100	89·11	9·29	1·19	·41
	Total ..	100	85·34	8·41	1·73	4·52
SIMLA.	Simla ..	100	61·25	3·00	17·48	18·27
	Kot Khai ..	100	96·63	·10	2·29	·98
	Total ..	100	69·31	2·34	14·02	14·33
KANGRA.	Kangra ..	100	95·25	3·00	·51	1·24
	Dehra ..	100	95·68	3·66	·26	·40
	Hamirpur ..	100	95·50	3·90	·33	·27
	Nurpur ..	100	90·77	7·94	·37	·92
	Palampur ..	100	98·28	1·48	·12	·12
	Kulu ..	100	96·18	2·65	·27	·90
	Total ..	100	95·51	3·60	·30	·59
HOSHIARPUR.	Hoshiarpur ..	100	93·35	5·24	1·10	·31
	Dasuya ..	100	93·23	5·93	·74	·10
	Garhshankar ..	100	92·42	6·71	·66	·21
	Una ..	100	94·21	4·92	·67	·20
	Total ..	100	93·31	5·69	·80	·20
JULLUNDUR.	Jullundur ..	100	85·83	9·94	2·84	1·39
	Nakodar ..	100	93·03	5·72	1·14	·11
	Phillaur ..	100	93·13	5·49	1·20	·18
	Nawashahr ..	100	86·44	12·02	1·27	·27
	Total ..	100	89·09	8·52	1·78	·61
LUDHIANA.	Ludhiana ..	100	83·56	13·29	2·01	1·14
	Jagraon ..	100	85·31	12·32	1·54	·83
	Samrala ..	100	81·67	16·58	1·11	·64
	Total ..	100	83·68	13·68	1·69	·95
FEROZEPORE.	Ferozepore ..	100	78·19	13·40	3·63	4·78
	Zira ..	100	91·60	7·78	·49	·13
	Moga ..	100	86·07	12·04	1·25	·64
	Muktsar ..	100	83·47	12·15	1·50	2·88
	Fazilka ..	100	72·90	14·40	1·08	11·62
	Total ..	100	81·33	12·31	1·62	4·74
LAHORE.	Lahore ..	100	68·94	8·78	14·09	8·19
	Chunian ..	100	88·28	8·58	2·07	1·07
	Kasur ..	100	87·02	8·97	2·47	1·54
	Total ..	100	79·11	8·78	7·66	4·45
AMRITSAR.	Amritsar ..	100	86·66	7·80	3·83	1·71
	Tarn Taran ..	100	90·92	7·13	1·55	·40
	Ajnala ..	100	89·73	9·19	·80	·28
	Total ..	100	88·61	7·86	2·51	1·02
GURDASPUR.	Gurdaspur ..	100	94·89	3·24	1·31	·56
	Batala ..	100	89·23	8·53	1·70	·54
	Pathankot ..	100	85·52	7·40	1·16	5·92
	Shakargarh ..	100	91·94	4·79	·44	2·83
	Total ..	100	90·90	5·97	1·19	1·94
SIALKOT.	Sialkot ..	100	90·89	2·37	1·75	4·99
	Pasrur ..	100	96·53	2·32	·75	·40
	Zafarwal ..	100	93·71	3·58	·59	2·12
	Raya ..	100	92·61	5·89	1·21	·29
	Daska ..	100	91·83	6·80	·87	·50
	Total ..	100	92·72	4·02	1·15	2·11

SUBSIDIARY TABLE IX.

Showing the percentages based on Subsidiary Table VIII.

District.	Tahsil.	Number of persons enumerated in Tahsil.	Persons born in: District of enumeration.	Persons born in: Contiguous Districts or States.	Persons born in: Non-contiguous Districts or States in the Punjab.	Persons born in: Outside the Punjab.
1	2	3	4	5	6	7
GUJRANWALA.	Gujranwala	100	84·82	11·94	1·95	1·29
	Wazirabad	100	85·15	11·88	1·49	1·48
	Hafizabad	100	92·23	6·01	1·10	·66
	Total ..	100	87·07	10·19	1·59	1·15
SHEIKHUPURA.	Khangah Dogran ..	100	55·60	19·97	23·14	1·29
	Sharakpur	100	64·97	13·13	20·08	1·82
	Total ..	100	60·17	16·63	21·65	1·55
GUJRAT.	Gujrat	100	96·09	2·18	·60	1·13
	Kharian	100	96·28	1·52	·41	1·79
	Phalia	100	87·28	9·85	1·31	1·56
	Total ..	100	93·17	4·57	·78	1·48
SHAHPUR.	Shahpur	100	96·36	2·34	·85	·45
	Khushab	100	97·43	1·94	·27	·36
	Bhalwal	100	84·36	12·60	2·49	·55
	Sargodha	100	79·52	7·72	11·06	1·70
	Total ..	100	88·43	6·83	3·94	·80
JHELUM.	Jhelum	100	90·83	4·28	1·85	3·04
	Pind Dadan Khan ..	100	95·89	2·54	·86	·71
	Chakwal	100	97·45	1·85	·23	·47
	Total ..	100	94·58	2·94	1·01	1·47
RAWALPINDI.	Rawalpindi	100	74·27	4·44	8·25	13·04
	Gujar Khan ..	100	94·42	3·03	·75	1·80
	Murree	100	92·94	·25	1·00	5·81
	Kahuta	100	97·19	·22	·15	2·44
	Total ..	100	85·44	2·90	4·14	7·52
ATTOCK.	Attock	100	94·20	1·23	1·38	3·19
	Pindigheb	100	98·63	·63	·20	·54
	Talagang	100	97·91	1·89	·10	·10
	Fatehjang	100	97·41	2·02	·12	·45
	Total ..	100	96·71	1·40	·56	1·33
MIANWALI.	Mianwali	100	95·32	1·56	1·15	1·07
	Bhakkar	100	97·10	·81	·30	1·79
	Isa Khel	100	94·25	·52	1·19	4·04
	Total ..	100	95·56	1·07	·81	2·26
MONTGOMERY.	Montgomery.. ..	100	60·75	12·13	24·08	3·04
	Okara	100	71·63	14·10	12·17	2·10
	Dipalpur	100	91·32	6·01	2·25	·39
	Pakpattan	100	93·79	3·66	1·89	·66
	Total ..	100	78·17	9·15	11·05	1·63
LYALLPUR.	Lyallpur	100	52·43	8·87	37·65	1·05
	Samundri	100	59·97	13·58	25·89	·56
	Toba Tek Singh ..	100	44·85	13·00	40·91	1·24
	Jaranwala ..	100	47·98	18·51	31·95	1·56
	Total ..	100	51·56	12 68	34·69	1·07
JHANG.	Jhang	100	97·82	1·29	·64	·25
	Chiniot	100	95·62	2·72	1·30	·36
	Shorkot	100	94·49	3·02	1·93	·56
	Total ..	100	96·26	2·21	1·17	·36
MULTAN.	Multan	100	88·34	2·66	5·82	3·18
	Shujabad	100	97·69	1·45	·44	·42
	Lodhran	100	98·17	·93	·38	·52
	Mailsi	100	95·52	2·84	·70	·94
	Khanewal	100	65·88	11·35	20·81	1·96
	Kabirwala	100	86·50	10·67	2·53	·30
	Total ..	100	88·52	4·83	5·19	1·46
MUZAFFARGARH.	Muzaffargarh ..	100	95·71	3·43	·49	·37
	Alipur	100	96·59	2·62	·34	·45
	Sanawan	100	97·49	2·05	·19	·27
	Leiah	100	96·11	3·07	·13	·69
	Total ..	100	96·37	2·87	·31	.45
DERA GHAZI KHAN.	Dera Ghazi Khan ..	100	96·38	·54	1·36	1·72
	Sanghar	100	97·03	·71	·04	2·22
	Rajanpur ..	100	97·51	1·75	·37	·37
	Jampur	100	99·02	·48	·21	·29
	Biloch transfrontier tract	100	99·57	..	·43	..
	Total ..	100	97·35	·79	·68	1·18

SUBSIDIARY TABLE IX.

Showing the percentages based on Subsidiary Table VIII.

State.	Number of persons enumerated in State.	Persons born in: State of enumeration.	Persons born in: Contiguous Districts or States.	Persons born in: Non-contiguous Districts or States in the Punjab.	Persons born in: Outside the Punjab.	State.	Number of persons enumerated in State.	Persons born in: State of enumeration.	Persons born in: Contiguous Districts or States.	Persons born in: Non-Contiguous Districts or States in the Punjab.	Persons born in: Outside the Punjab.
1	2	3	4	5	6	1	2	3	4	5	6
PUNJAB STATES	..	84·5	..	..	2·4						
Dujana	100	73·67	18·41	4·77	3·15	Bilaspur	100	89·82	7·60	2·14	·05
Pataudi	100	68·31	19·39	3·38	8·92	Mandi	100	94·83	3·96	·70	·51
Kalsia	100	67·25	25·56	3·81	3·35	Suket	100	97·07	1·93	·85	·15
Bashahr	100	94·25	5·28	·37	·1	Kapurthala	100	82·91	15·34	1·39	·36
Nalagarh	100	89·97	7·92	2·03	·08	Malerkotla	100	81·70	15·47	2·36	·47
Keonthal	100	46·08	49·08	1·71	3·13	Faridkot	100	71·80	20·87	5·35	1·98
Baghal	100	93·81	4·49	1·53	·14	Chamba	100	96·35	1·25	·60	1·80
Jubbal	100	86·43	11·11	·93	1·53	Patiala	100	84·40	12·25	·89	2·46
Other Simla Hill States ..	100	87·97	8·13	2·97	·93	Jind	100	75·41	19·64	1·81	3·14
Loharu	100	92·43	2·88	1·33	3·36	Nabha	100	75·86	18·51	1·86	3·77
Nahan	100	89·64	5·75	2·84	1·77	Bahawalpur	100	89·25	3·99	2·01	3·85

CHAPTER IV.

Religion.

Section I.—General Distribution by Religions and Meaning of Figures.

75. The numerical strength of each religion returned is given in Imperial Table VI for each district and State. Imperial Table XV gives the Christian population by sect and race, and Imperial Table XVI which is divided into two parts, the age distribution of Europeans and Allied races and Anglo-Indians. Reference to Statistics.

In addition to these tables, Table VI-A, printed in Part III as an appendix to the Imperial Table VI, contains details of sects of Hindus, Musalmans, Jains and Sikhs. The distribution of the population of tahsils by principal religions is shown in Provincial Table II.

At the end of this chapter will be found the following subsidiary tables in which the most prominent features of the statistics are exhibited by means of proportionate and comparative figures :—

Subsidiary Table I.—General distribution of the population by religions.
Subsidiary Table II.—Distribution by districts of the main religions.
Subsidiary Table III.—Christians, Number and Variation.
Subsidiary Table IV.—Religion of Urban and Rural population.

76. In 1911 the instructions issued to enumerators for filling in column 4 (*a*) of the census schedule required that the religion to which a person claimed to belong must be accepted, and in view of the unwillingness of large number of Jains and Sikhs to be classed separately from Hindus, permission was given to record such persons as Jain-Hindus or Sikh-Hindus. The same instructions were repeated at the present census with the modification that the use of the terms Jain-Hindu and Sikh-Hindu was to be avoided as far as possible. Jainism is indigenous to India, but its tenets are totally different from those of Hinduism, while Sikhism is a religion with a very distinct worship of its own, and having attained a position of independence is fully entitled to rank as a separate religion. Thus, at the present census it was intended to ascertain the true number of Jains and Sikhs, which could not be done if some of them were returned under the general head "Hindus." In the case of the depressed classes, such as Chuhras, Sansis, etc., it was laid down that they should be returned as Hindus if they did not profess to belong to any recognised religion, and the scruples of Hindu enumerators in returning Chuhras as Hindus, or the claims of Chuhras to be registered as belonging to a separate religion, were not allowed to override these instructions. 30,073 persons belonging to these classes were entered under the name of their caste or tribe, and they were treated as Hindus in the course of tabulation. The detail will be found on the title page of Table VI. No alteration was made in the significance of the terms denoting other religions, except that persons recorded under "Indefinite beliefs" were excluded from "Christians" and shown under a separate heading "Others" in Table VI. Meaning of figures.

SUBSIDIARY TABLE IX.

Showing the percentages based on Subsidiary Table VIII.

State.	Number of persons enumerated in State.	Persons born in				State.	Number of persons enumerated in State.	Persons born in			
		State of enumeration.	Contiguous Districts or States.	Non-contiguous Districts or States in the Punjab.	Outside the Punjab.			State of enumeration.	Contiguous Districts or States.	Non-Contiguous Districts or States in the Punjab.	Outside the Punjab.
1	2	3	4	5	6	1	2	3	4	5	6
PUNJAB STATES	..	84·5	..	..	2·4						
Dujana	100	73·67	18·41	4·77	3·15	Bilaspur	100	89·82	7·69	2·44	·05
Pataudi	100	68·31	19·39	3·38	8·92	Mandi	100	94·83	3·96	·70	·51
Kalsia	100	67·25	25·56	3·84	3·35	Suket	100	97·07	1·93	·85	·15
Bashahr	100	94·25	5·28	·37	·1	Kapurthala	100	82·91	15·34	1·39	·36
Nalagarh	100	89·07	7·92	2·03	·08	Malerkotla	100	81·70	15·47	2·36	·47
Keonthal	100	46·08	49·08	1·71	3·13	Faridkot	100	71·80	20·87	5·35	1·98
Baghal	100	93·84	4·49	1·53	·14	Chamba	100	96·35	1·25	·60	1·80
Jubbal	100	88·43	11·11	·93	1·53	Patiala	100	84·40	12·25	·89	2·46
Other Simla Hill States ..	100	87·97	8·13	2·97	·93	Jind	100	75·41	19·64	1·81	3·14
Loharu	100	92·43	2·88	1·33	3·36	Nabha	100	75·86	18·51	1·86	3·77
Nahan	100	89·64	5·75	2·84	1·77	Bahawalpur	100	89·25	3·09	2·01	3·85

CHAPTER IV.

Religion.

SECTION I.—GENERAL DISTRIBUTION BY RELIGIONS AND MEANING OF FIGURES.

SECTION II.—MUSALMANS.

SECTION III.—HINDUS.

SECTION IV.—SIKHS.

SECTION V.—CHRISTIANS.

SECTION VI.—MINOR RELIGIONS.

Section I.—General Distribution by Religions and Meaning of Figures.

75. The numerical strength of each religion returned is given in Imperial Table VI for each district and State. Imperial Table XV gives the Christian population by sect and race, and Imperial Table XVI which is divided into two parts, the age distribution of Europeans and Allied races and Anglo-Indians. **Reference to Statistics.**

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General distribution of population by religions.

77. The marginal table shows the general strength of the different religions which make up the total population of both the provinces of the Punjab and Delhi. The Musalmans, Hindus and Sikhs taken together constitute nearly 98 per cent. of the population, Musalmans alone contributing more than 50 per cent. Of the remaining 2 per cent., the number of Christians is greater than all the minor religions put together.

Religion.	Actual number.	Number per mille of the total population.
Musalmans	12,955,141	506
Hindus	9,125,202	357
Sikhs	3,110,060	121
Christians	346,259	13
Jains	46,019	2
Buddhist	5,918	} 1
Parsi	598	
Jews	36	
Indefinite beliefs	15	
Total ..	25,589,248	1,000

Local distribution.

78. The religious distribution of the people by natural divisions is shown in the margin. Musalmans preponderate in the North-West Dry Area and their proportion is smallest in the Himalayan Division. Hindus on the other hand abound in the Indo-Gangetic Plain West but are weakest in the North-West Dry Area. Sikhs and Christians are strongest in the Indo-Gangetic Plain West, while Buddhists appear only in the Himalayan Tract.

Natural Divisions.	Per 10,000.					
	Musalmans	Hindus.	Sikhs.	Christians.	Jains.	Buddhists.
Indo-Gangetic Plain West ..	1,756	1,978	856	60	15	..
Himalayan ..	30	642	3	2	..	2
Sub-Himalayan ..	1,402	608	223	46	3	..
North-West Dry Area ..	1,875	338	134	27	..	..

The relative strength of the main religions in each natural division has been worked out in Subsidiary Table II. Its examination shows that in the Indo-Gangetic Plain West the Hindus outnumber the Musalmans, and the Sikhs are less than half the latter in number. In the Himalayan Division Hindus form the major portion of the population, and the number of the followers of other religions is insignificant. In the Sub-Himalayan Area Musalmans are more numerous than Hindus and form 61 per cent. of the population, the number of Hindus and Sikhs being 27 and 10 per cent. respectively. The North-West Dry Area is mainly populated by Musalmans; Hindus, Sikhs and Jains taken together being 21 per cent. of the population.

The diagram No. 30 illustrates the distribution of the main religions by districts and States. The length of the strips opposite each unit indicates the total population, and the different shades the proportionate strength of the religions followed.

No. 30. DISTRIBUTION OF THE MAIN RELIGIONS, BY DISTRICTS AND STATES.

MUSALMAN.. HINDU.. SIKH. CHRISTIAN.. OTHERS..

Punjab. Attock. Jhelum. Dera Ghazi Khan. Muzaffargarh. Mianwali. Gujrat. Jhang. Bahawalpur. Shahpur. Rawalpindi. Multan. Montgomery. Gujranwala. Sheikhupura. Sialkot. Lyallpur. Lahore. Kapurthala. Gurdaspur. Amritsar. Jullundur. Ferozepore. Kalsia. Malerkotla. Ludhiana. Gurgaon. Hoshiarpur. Ambala. Faridkot. Delhi. Karnal. Hissar. Dujana. Patiala. Nabha. Rohtak. Pataudi. Simla. Jind. Loharu. Chamba. Kangra. Nahan. Simla Hill States. Mandi. Bilaspur. Suket.

The local distribution will be considered in detail under each religion.

Variation General.

79. The inset table compares the strength of each religion *per mille* of the total population with the rate of variation per cent. since 1911. It will be observed that though there has been an increase of 5·7 per cent. in the population of both the provinces, the growth and decline of the different religions has been very uneven. The growth of Christians and fall in the number of Jews stand conspicuous. Among the principal religions the increase per cent. in Sikhs is a healthy sign of future expansion. The special causes influencing the variation in the case of each religion will be discussed in the following paragraphs.

Religion.	Proportion *per mille.* 1911.	1921.	Variation per cent. in population since 1911.
Musalmans ..	508	506	+5·5
Hindus ..	363	357	+4·0
Sikhs ..	119	121	+7·9
Christians ..	8	13	+73·3
Jains ..	2	2	−1·6
Buddhists ..	..	..	−23·0
Parsis ..	..	..	−8·4
Jews ..	..	..	−33·3

Section II— Musalmans.

Meaning of Islam.

80. The word "Islam" literally means (1) peace, (2) the way to achieve peace, and (3) submission. The word in its religious sense signifies complete submission to the will of God. "Islam" in its popular sense is the name by which the religion preached by the Holy Prophet Mohammed, who appeared in Arabia over thirteen hundred years ago, is known.

Essentials of Islam.

81. The basic principles of Islam are not contained in the *Kalima* only, as remarked in the Punjab Census Report 1911, but in the seven articles of faith enumerated in the following quotation :—

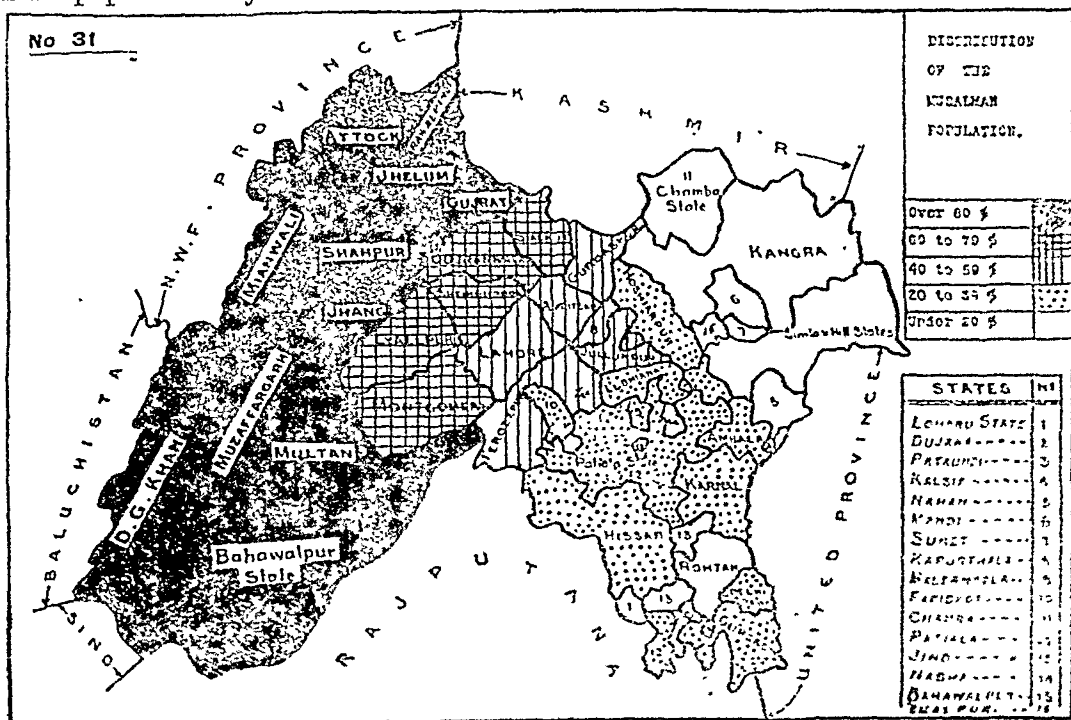
"*Amanto billahe wa malaikatihi wa kutobihi wa rusolehi wal yaumil akhiri walqadri khairehi wa sharrehi minallahi taala wal baas baadal maut.*

First of all every Muslim must believe in (1) Allah, (2) angels, (3) revealed books, (4) divine messengers, (5) the last day of judgment, (6) the measurement of good and evil by God and (7) the life after death. It must be noted however that these seven cardinals, the rejection of any of which would be fatal to one's belief in Islam, do not partake of the character of a dogma. They are, on the contrary, the aggregate of those verities which furnish the motive power of a Muslim life in which he translates these principles into action.*

The whole Muslim world after accepting these cardinal principles of Islam, accepts the Holy Quran as the repository of the law recapitulating every law revealed to Mohammad and to the prophets who preceded him. To make one a practical Muslim requires the belief in and practice of the five "pillars" of Islam, namely, (1) declaration of faith in the oneness of God and divine messengership of Mohammad, (2) prayers, (3) alms-giving and poor-rate (*zakat*), (4) fasting, and (5) pilgrimage to the holy shrines of Mecca. These are briefly the main principles of Islam.

Local distribution.

82. The map printed below indicates the relative distribution of the Musalman population by districts and States. Of 12,955,141 Musalmans scattered



* In all these questions relating to Eastern religions, my Personal Assistant, Sheikh Abdul Majid, speaks with a much greater authority than I could, and I have left entirely to him the exposition of the Islamic position and faith.

throughout the provinces, more than three-fifths belong to the Sub-Himalayan Division and North-West Dry Area, as shown in the Subsidiary Table I. The Musalmans muster strong in the Attock district, where they form 91 per cent. of the population. They contribute 88 per cent. each to Jhelum and Dera Ghazi Khan. In the remaining districts of the Western Punjab their proportion ranges between 82 and 86 per cent. Generally speaking the Western Punjab is the stronghold of Musalmans and their proportion decreases as we cross the Punjab from the West in an East-South-Easterly direction. The supremacy of Islam in this tract is due to this part being exposed to the raids of foreigners. The Musalman invaders generally came from the North and West, and seem to have left their indelible mark on the religious constitution of this tract. In the Central districts the relative strength varies from 80 to 40 per cent. The number of Musalmans in the Himalayan Division is 77,425, which is barely 5 per cent. of the population of that tract. The lowest percentage is reached in Kangra (5 per cent.) in British Territory, and in Suket (1 per cent.) in the Punjab States.

Variation. 83. The growth of the Musalman population of the provinces is compared in the marginal statement with the rate of variation per cent. in the total population during the past four decades. It will be seen that the figures display a steady development in the number of Musalmans since 1881, notwithstanding disturbing causes such as plague and malaria, which inhibited the natural growth of population in the decade preceding 1911.

Decade.	Number of Musalmans in every 10,000 of population.	Rate of variation per cent. in	
		Musalmans.	Total population.
1881	4,758	..	..
1891	4,739	+9·7	+10·1
1901	4,922	+12·5	+6·3
1911	5,075	+·8	−2·2
1921	5,063	+5·5	+5·7

In the decade under review though there is no appreciable difference in the two sets of the rate of variation so far as provincial figures are concerned, yet the proportion of Musalmans to the total population presents a slight decrease when compared with the 1911 figures.* A closer examination of the variation during the past ten years in all natural divisions, worked out in the statement below, shows that Musalmans have not increased as rapidly as the total population in the North-West Dry Area where they are largely concentrated. It seems that they suffered more than their share from the vicissitudes of the decade in this area, and this accounts for the loss suffered by Musalmans in their proportion to the total population.

Natural Divisions.	Musalmans (actual number).		Increase per cent. in decade.	
	1911.	1921.	Musalmans.	Total population.
Indo-Gangetic Plain West	4,144,971	4,491,944	8·4	7·2
Himalayan	74,205	77,425	4·3	·8
Sub-Himalayan	3,551,989	3,587,246	1·0	·7
North-West Dry Area	4,504,312	4,798,526	6·5	9·4

This decline in the proportion of Musalmans is further explained if we compare the increase in the relative strength of the different religions in the Western Punjab where the population is essentially Musalman. An extract from Subsidiary Table IV is reproduced below for reference.

District or State.	Number per 10,000 of the population who are					
	Musalman.		Hindu.		Christian.	
	1911.	1921.	1911.	1921.	1911.	1921.
Attock	9,088	9,091	380	511	14	11
Rawalpindi	8,362	8,257	884	1,005	152	163
Jhelum	8,840	8,866	670	730	9	9
Montgomery	7,467	7,188	1,248	1,328	11	146
Shahpur	8,330	8,280	1,058	1,142	125	156
Mianwali	8,787	8,623	1,064	1,284	5	10
Lyallpur	6,113	6,074	1,803	1,853	374	429
Jhang	8,195	8,332	1,424	1,496	4	8
Multan	8,167	8,218	1,554	1,505	30	67
Bahawalpur	8,381	8,285	1,403	1,467	3	4
Muzaffargarh	8,691	9,679	1,197	1,229	1	6
Dera Ghazi Khan	8,906	8,834	1,072	1,140	1	1

* We have to remember that the percentage of Musalmans has fallen from 50·8 to 50·6 per cent., during the decade, and that this difference is less than the 1 per cent. of error which may be attributed to the census figures.

The examination of the above extract makes it clear that Musalmans have not advanced as rapidly as the followers of other religions. The causes of this slow progress are different in the case of each district. In the Dera Ghazi Khan and Muzaffargarh districts where the population is predominantly Musalman, the influenza epidemic exacted a heavy toll. The mortality from this disease was appalling in the rural areas of these districts which are entirely populated by Musalmans. In other districts, leaving out Montgomery and Lyallpur, in which the foreign element as the result of migration (discussed in para. 40 of Chapter I) is largely responsible for the decrease in the proportion of Musalmans, it can be safely concluded from the figures noted in the margin that Chuhras, who in 1911 were recorded as Musalmans, have now been absorbed into Christianity or Hinduism either by conversion or on account of the new classification adopted at the present census.

District or State.	Number of Musalman Chuhras and Musallis.	
	1911.	1921.
Rawalpindi ..	8,609	8,558
Jhelum ..	18,931	14,145
Shahpur ..	56,785	56,419
Mianwali ..	10,274	8,704
Bahawalpur ..	23,538	16,293

The growth of sects in Islam.

84. The birth of sects in Islam dates back to the death of the holy Prophet, when the dispute on the question of his successorship gave rise to strong differences of opinion among the followers of Islam. Abu Bakar was the first Caliph, then Umar, then Usman, and Ali was the fourth. But there was a section of Musalmans who opined that Ali was the only rightful successor to the Prophet. Thus two divisions sprang up among Musalmans holding divergent views on this point. Those who sided with Ali were styled Shias and the rest Sunnis.

There have been four great Jurists in Islam on the Sunni side—Abu Hanifah, Shafai, Malak, and Ahmad Hanbal. They have written beautiful books on the subject, basing their arguments on the Holy Quran and the Prophet's traditions. Every Muslim has a perfect right to follow any one of them or to make his own judgment on the things concerned, in the light of the traditions of the Prophet. Those who are guided by the traditions of the Prophet are called Traditionalists or Ahl-i-Hadis, and the schools of those which accept the teaching of particular jurists are named after them. But all these schools of thought never differ from each other in matters which constitute the basic principles of Islam.

Again, every century in Islam saw men of great piety and learning. The magnetism of their devotion to Islam and their self-abnegation told powerfully upon their contemporaries, and they gathered round themselves groups of pupils and admirers. They represent the esoteric side of Islam. The admirers of these saintly personages followed their teachings, and every subsequent generation has regarded them with respect. These admirers were sometimes named after these Muslim saints such as Qadris, Chishtis, Naqshbandis, Soharwardis, and Ahmadis. Those great divines enriched Islamic literature with their learned expositions of Islam, but they never preached anything inconsistent with the fundamental tenets of Islam. They all respect each other ; they may differ in their explanation of certain events of a historic or of an academic nature mentioned in the Quran, but their mutual respect is all the same, the reason being that there can be no two opinions in the essential matters that constitute Islam. This brief description shows that the so-called sects of Islam are not sects in the received sense of the word, and the basic structure of the Faith, notwithstanding all minor divergences, remains unshaken.

Classification of the entries of sects.

85. The method adopted at the present census for classification of the entries of Musalman sects in the census returns, was practically the same, as in 1911. The sects returned have been grouped in Table VI (Appendix Part III) under three main heads, *viz.*, (1) Shias, (2) Sunnis, and (3) Reformers. A small number of entries which did not appear to fall under either of these heads has been shown separately under the head " Sects analogous to other religions."

Strength of sects.

86. The provincial figures for the sects are detailed in the margin. Nearly ninety-seven per cent. of the Musalman population in both the Punjab and Delhi Provinces is Sunni, and of the rest more than two-thirds

Sect.	Punjab.	Delhi.	Sect.	Punjab.	Delhi.
Shias ..	256,629	2,722	Reformers ..	89,632	355
Sunnis ..	12,466,791	138,681	Ahl-i-Quran ..	326	3
Hanfi ..	381	15	Ahmadi ..	28,816	35
Miscellaneous ..	5,690	..	Ahl-i-Hadis ..	60,327	317
Qadri ..	30	..	Mawahid ..	63	..
Shafi ..	271	..	Sects analogous to other religions ..	431	..
Unspecified ..	12,460,509	138,666			

returned themselves as Shias. Among the minor sects the number of Ahl-i-Hadis heads the list. The figures in the head "Miscellaneous" under Sunnis are very small and the reason appears to be in the effort on the part of the enumerators to return main sects only.

Variation in sects.

87. The figures for the main sects of the Punjab and Delhi combined are compared in the margin for the two censuses of 1911 and 1921. It will be noticed that the increase in Sunnis and Shias has been more or less proportional to the increase in the total population of Musalmans, but the number of Ahl-i-Hadis and Ahmadis are more than half as much again than in 1911. The increase in the number of Ahl-i-Hadis, which is a sub-sect of Sunnis, shows that they are now no longer reluctant, as noticed in 1911, to express their views publicly, and the prejudices against the followers of this school of thought are gradually disappearing. The additions to the ranks of Ahmadis is due to the propaganda work earnestly pursued by the two sections of the community (stationed at Lahore and Qadian) into which it was divided on the death of Maulvi Hakim Nur-ud-Din, an able successor of the original founder of the movement. In 1908, when the founder died, the community had one high school at Qadian, a Theological School, two vernacular newspapers, and an English Monthly "The Review of Religions." The community has during the past decade extended the scope of its activities by starting missions in Europe and America. Production of religious literature by both the sections has done much in drawing men to their side. Two new schools have recently been opened by the Lahore section at Lahore and Baddo-Malli in the Sialkot district. The small number of entries returned under the "Sects analogous to other religions" shows a tendency on the part of the local converts to record themselves under one or the other of the established sects.

Sects.	1911.	1921.	Increase or decrease per cent.
All Sects ..	12,275,477	12,955,141	+5·5
Sunnis ..	11,968,758	12,605,472	+5·3
Shias ..	247,532	259,351	+4·8
Ahl-i-Hadis ..	39,083	60,644	+55·5
Ahmadi ..	18,695	28,851	+54·3
Sects analogous to other religions ..	20,104	823	−95·8

Section III.—Hindus.

Meaning of the term Hindu.

88. The derivation of the term Hindu is fully discussed in para. 127 of the Punjab Census Report 1911. The term was originally invented by the early Musalman invaders to designate the people living east of the Indus, but its use has in the course of centuries been widely extended so as to cover all inhabitants of India who believe in the old faith.

Definition of Hinduism.

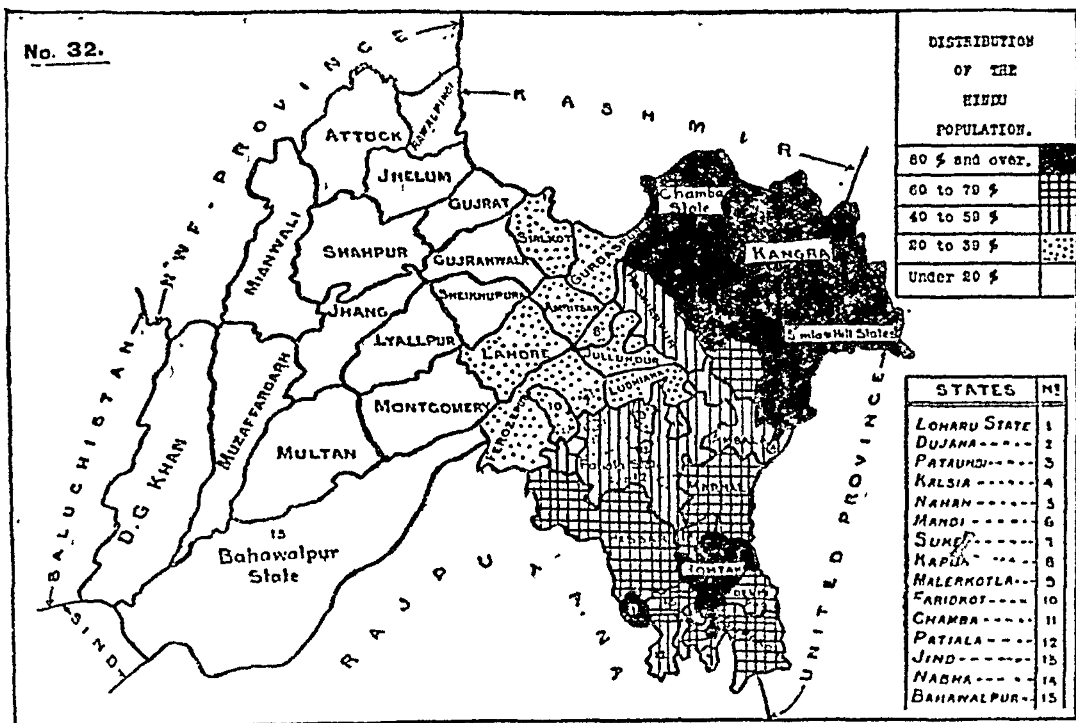
89. An attempt was made at the last census to evolve a complete definition of Hinduism and reports were called from the provincial Superintendents as to the application of certain tests prescribed by the Census Commissioner for the purpose of determining a criterion which might be taken to separate the pure Hindu from the low castes, which have adopted some or other form of Hinduism; but the result was an extraordinary divergence of opinion. The views expressed differed, according as Hinduism was considered to connote a religious, a racial, or a social organisation. It was found to include within its pale persons of various beliefs and shades of thought from the orthodox Brahman, down to the sweepers and members of other low castes, who are supposed to cause pollution by touch, and are not allowed access to Hindu temples. The term is indeed comprehensive enough, as remarked by the Census Commissioner in 1911, to include a complex congeries of creeds and doctrines. There are, however, two salient features of the Hindu religion which, generally speaking, distinguish Hindus from the followers of other religions, *viz.*, (1) religious or economic objection to the slaughter of cows, (2) acknowledgment of the supremacy of Brahmans. There are certain sectarian groups who disown the supremacy of Brahmans,* but their number is very small compared with those who still hold the Brahmans to be spiritually and socially above ordinary human beings.

*According to Rai Bahadur Pandit Hari Kishen Kaul (Chapter IV, para 132 (a) of the Census Report of 1911), the acknowledgment of the supremacy of Brahmans, whose claims to superiority are based on birth alone, is made by lower Hindu castes only.

Taking the religious and social aspect of Hinduism into consideration, we can say that in order that a person may be called a Hindu, he should be a native of India and not of foreign descent, acknowledge the supremacy of Brahmans, or, at least, refuse to kill or harm kine, and belong to a recognised Hindu caste.

90. The census returns comprise Hindus of various beliefs and diverse races who may or may not be considered Hindus according to many orthodox votaries of the ancient religion. The sole criterion adopted for the purposes of the census was to treat every person as a Hindu who did not profess to belong to any recognised religion such as Islam, Christianity, etc. The definition is defective in the sense that it brings within the pale of Hinduism all members of the depressed classes who do not conform to the doctrines of any particular religion. In the matter of their customs and usages these classes are usually governed by the religions prevailing in the locality where they are found. It is a well-known fact that Chuhras and Chamars have no objection to eating beef in villages where the Muslim element reigns supreme, but not so in Hindu tracts. The formal adoption of the Hindu religion by these low castes does not improve their social status. They are looked down on by their Hindu neighbours. No Brahman ministers to them. They are not allowed to enter Hindu places of worship, and they are supposed to cause contamination by touch. The definition of the term Hindu might be improved if we admit a third class of castes, comprising "untouchables" who are in the transitional stage, and show them as professing no specified religion. Definition adopted for census purposes.

91. The inset map illustrates the local distribution of Hindus, who constitute more than one-third of the population of the provinces. Local distribution.



The most distinctively Hindu districts belong to the Himalayan Division, where Hindus amount to 94 per cent. of the population. Hindus represent a majority, 60 to 79 per cent. of the population, in the Delhi Province and in the districts and States of the Southern Punjab, the percentage rising in the Rohtak district to 82 per cent. In the central districts and States of the Punjab their number varies between 20 to 40 per cent. The proportion of Hindus steadily diminishes as we proceed westward, and the minimum 5 per cent., is reached in the Attock district.

Variation.

92. The statement in the margin shows the relative strength of Hindus in every ten thousand of the population of the provinces at the last five censuses, and gives the rate of variation per cent. during each decade. The number of Hindus has increased since 1911 by 4 per cent., but their proportion has declined from 3,628 to 3,560 per 10,000, which means that they have not advanced as rapidly as the followers of other religions. The explanation of this comparative stagnation during the past decade is found chiefly in the small percentage of increase exhibited by the Himalayan and Sub-Himalayan Divisions which contain more than half of the Hindu population. The figures are given in the margin. The other causes which seem to have hampered the growth of Hindus are: (1) conversion of large number of Chuhras to Christianity, (2) the separation of Sikhs from the ranks of Hindus, (3) the effects of influenza on the districts of Gurgaon and Rohtak, both mainly Hindu, and, possibly, (4) the evil effects of child marriage and enforced widowhood.

Census.	Population in every 10,000.	Variation per cent. of the total Hindu population during the decade.
1881 ..	4,384	..
1891 ..	4,408	+10·7
1901 ..	4,179	+2·7
1911 ..	3,628	−15·2
1921 ..	3,560	+4·0

	Variation per cent. since 1911.
Indo-Gangetic Plain West	+7·2
Himalayan ..	+·8
Sub-Himalayan ..	+·7
North-West Dry Area ..	+9·4

The Chuhras have always been considered as the chief disturbing element in the return of religions in the Punjab on account of the flexibility of their religion. Special instructions were issued at the present census to return all Chuhras who did not profess Christianity or Islam as Hindus but in spite of these precautions, the figures in the margin show that Hindus have lost 81,229 Chuhras. Chuhras are found throughout the provinces and there is no reason to believe that they did not multiply, *pari passu*, with the rest of the population. Taking the increase (5·7 per cent.) shown by the population at large, into account, the net calculated loss suffered by Hindus in Chuhras amounts to 90,704 persons. The above loss seems to be due partly to real conversions to Christianity, which shows an abnormal increase in the number of its Indian followers, and partly to the registration of Chuhras as Mazhabi Sikhs. There is no sharp line of distinction between Sikhism and Hinduism, and it was due to this that in 1911, 44,000 persons described themselves as Sikh-Hindus. The change in the political atmosphere of the Punjab during the past decade has led Sikhs to separate themselves from the ranks of Hindus with the result that very few persons returned themselves as Sikh-Hindus at the present census. It seems probable that many Sikhs who were classed as Hindus at the former census have returned themselves as Sikhs at the present one. Again, the districts of Gurgaon and Rohtak suffered heavily from the ravages of the influenza epidemic in 1918. The death rate from influenza in these districts was estimated as 123 and 96 *per mille*, respectively. The percentage of Hindus to the total population in Rohtak and Gurgaon is 82 and 67 respectively. It is also sometimes argued that the prevalence of early marriage and enforced widowhood have made the Hindus less prolific than other communities, but the evidence for such belief requires careful sifting. The growth of the Hindu population has been largest in the North-West Dry Area (9·4 per cent.) which contains a large proportion of Musalmans, while the Himalayan Division which is exclusively Hindu shows a ·7 per cent., increase only, though both the areas were affected more or less equally by influenza and recruitment for the great war.

Religion.	Actual number of Chuhras, Musallis and Mazhabis.		(+) increase (−) decrease.
	1911.	1921.	
Hindu ..	789,915	708,686	−81,229
Musalman ..	393,718	374,945	−18,773
Sikh ..	73,160	106,709	+33,549

In this connection I am indebted to Mr. H. L. O. Garrett, I. E. S., who, during a part of the war was stationed as Recruiting Officer in Ludhiana, a central Sikh district, for some interesting observations. Mr. Garrett writes :—

"My experience during 1917 and 1918 in Ludhiana and the adjacent territories was that there were a large number of families of the Hindu Zamindar class of which those members who had enlisted in the Army had, as a matter of course, become Sikhs. Those who in the ordinary course of events would have stayed at home did not do so. When, as a result of the intensive recruiting at the later stages of the war, the latter were induced to join up, they too became Sikhs. This developed into any ordinary Hindu of the zamindar class being taken by Sikh Recruiting Officers on condition of his becoming a Sikh. I have no figures by me but I know from memory that it was almost a daily occurrence for—say—Ram Chand to enter our office and leave it as Ram Singh—Sikh recruit. So much so that the local Hindu Recruiting Committee protested that their returns were being adversely affected. It would be worth while enquiring from other ex-Recruiting Officers whether such was their experience, but my colleague, Mr. Crump, and myself often commented on the matter and both agreed that the Sikh returns at the next census would be affected by it. It would further be interesting to ascertain how far these converts have relapsed after their brief period of military service. Conversion on other than military grounds just before the war was not common. I have seen allusions, quoted in the Introduction to my new Edition of Cunningham's History of the Sikhs, to the apathy of the Khalsa on the subject."

93. It has been stated that Hinduism includes monotheists, polytheists and pantheists. The explanation to this variety of religious beliefs and social practices is generally based on the theory that the ancestors of Hindus were immigrants from Central Asia, and that Hinduism, which was originally a pure and simple creed, has had to compromise with the Animism of the population, amongst whom it spread by accepting several of its godlings and superstitions. The explanation, however, loses some force on account of the probable absence of any organised missionary activity, among the Hindus, at the early stage of their history. Moreover, compromise implies selection and rejection and the existence of some agency entrusted with the duty of the selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it practically covers all the beliefs and customs which prevail amongst the tribe who are included within its pale. Again, the very theory which forms the basis of this line of argument has been doubted by a learned Indian Scholar*, who has shown that there is no expression in the Vedas reminiscent of a foreign homeland, such as is likely to be met with in the literature of an immigrant race. According to this authority the higher forms of Hinduism are evolved from the lower ones, rather than other way about. This argument is now generally accepted by educated Hindus and affords an explanation of the origin of certain social customs. If this view is accepted Hinduism will have developed on rather unusual lines. In other religions the line of evolution seems to have been from polytheism to monotheism, but in Hinduism it was probably from polytheism to the higher pantheism.

The growth of Hindu sects.

It is very difficult to trace the growth of sects in Hinduism. As pointed out above it has no settled creeds which are obligatory on every Hindu. It does not prescribe any uniform standard for the innumerable sects and castes which bear its name. However, there are three ways of salvation recognised by the Hindu religious philosophers, namely, the way of knowledge, the way of faith and the way of service, and the two broad divisions into which Hindus can be divided seem to have sprung up from the difference in the relative importance to be attached to these three ways. The followers of the great Philosopher Sankaracharya maintain, that the Supreme Being is the only Reality and that the phenomenal universe is Mâyâ, and that salvation comes only from the realisation of this fact. They give, in other words, a subordinate position to faith and service. The followers of Ramanuja, Madhva and Vallubhacharya refute the doctrine of the non-reality of the phenomenal universe, and lay more stress on faith and service than on knowledge. The Hindus may be divided as pointed out in para. 164 of the Punjab Census Report of 1911 into (1) the followers of Vaishnava, (2) the orthodox grihastis, (3) the uneducated masses, (4) the followers of reformers whose doctrines do not conform to the principles of either school of thought, and (5) saint worshippers. The sects which fall under these groups are fully described in the Punjab Reports of the previous censuses, and need no further remark.

* Referred to on page 406 of the Indian Year Book for 1918.

The strength of sects.

94. The figures of sects returned are given in the margin according to the system of grouping adopted in 1911. Nearly 84 per cent. of the Hindu population in the provinces has been registered under the head "Sanatan Dharm." The word ordinarily means orthodox Hindu, but what particular form of doxy is to be considered orthodoxy is not clear. The phrase is chiefly used in opposition to the Arya Samaj, and in all probability denotes the number of persons who were averse to the use of the term "Arya." Thus the figures under the head Sanatan Dharm include a large proportion of persons who are Hindus by religion, but are unable to define their sects exactly. Sects of low caste come next in importance. The figures indicate that most of the members of the depressed classes still follow their own "Gurus" and it is only by the expansion of the term "Hindu" that they are brought within the pale of the ancient religion. The Aryas, or followers of the Vedic Dharm, rank third (2·63 per cent.) in numerical strength.

Sects.	Punjab.	Delhi.
1. OLD SECTS :		
(a) *Religious Orders*—		
Bairagi	4,407	353
Udasi	2,661	..
Faqir	10,606	..
Sanyasi	1,381	..
Jogi	2,238	412
Gorakh Panthi ..	1,216	61
(b) Saint Worshippers—		
Dadu Panthi	374	12
Gugapir	1,812	..
Kabir Panthi ..	37,111	9,394
Kalu Panthi ..	21,257	..
Namabansi ..	5,471	..
Pabuji	5,347	..
Panjpiria	27,363	..
Rai Dasia	14,490	12,668
Ram Raya ..	201	..
Sewak Darya ..	4,073	..
(c) Orthodox Hindus—		
Sanatan Dharm ..	7,385,196	276,923
2. SECTS WORSHIPPING MUSALMAN SAINTS IN ADDITION TO THEIR OWN GODS—		
Sarwaria	88,837	..
Shamsi	394	..
3. SECTS OF LOW CASTES—		
Balmiki	221,027	77
Lal Begi	437,295	12,696
Ram Dasia ..	239,869	130
Balashahi	3,330	..
4. REFORMERS—		
Arya	210,872	12,281
Brahmo	298	7
Dev Dharm ..	3,597	..
Nanak Panthi ..	9,716	7
Radha Sawami ..	2,710	402
5. MISCELLANEOUS—		
(a) Miscellaneous Sects ..	20,481	112
(b) Castes returned as sects	20,429	16
6. UNSPECIFIED ..	11,396	..
7. SECTS ANALOGOUS TO OTHER RELIGIONS ..	4,196	..

Other important entries are Sarwaria (88,837) or Sultani, the worshippers of the great Saint Sultan Sakhisarwar, who settled down and practised austerities in the country round Multan; Kabir Panthi (40,505), the followers of Kabir, a pupil of Ramanand, who was born in 1440 A. D. and whose mission was generally directed against idolatry; Panjpiria (27,363), the worshippers of five saints which every worshipper is at liberty to select for himself: Kalu Panthis (21,257), the followers of Kalu Bhagat, a waterman (*kahar*) by caste, who according to one version was the disciple of the Sikh Guru, Arjan, and who according to another, received supernatural powers from an ascetic who gave him his *Gudri* (cloak). The figures under the head "Miscellaneous" include Sansis, Bawarias and others who really profess no religion.

Variation in Sects.

95. The marginal table indicates the changes in the figures of the minor sects under the five main heads since 1911. The increase per cent. in the number of the adherents of the old faith is slightly more than the increase shown by the Hindu population of the provinces. The apparent increase (283·9 per cent.) in the number of Fakirs since 1911 is probably due to the inclusion of a number of Bairagis, Sanyasis, Jogis and others under the generic term "fakir" at the present census. There has been a remarkable increase in the number of persons classed as Namabansis from 972 to 5,471 : but of this increase an explanation cannot be offered. The figures, however, suggest that most of the minor sects are gradually losing ground, probably on account

Sects.	1911.	1921.	Variation per cent.
ALL SECTS ..	8,773,621	9,125,202	+4·0
1. OLD SECTS	7,388,249	7,825,027	+5·9
(a) Religious Orders ..	27,320	23,335	−14·6
Bairagi	7,120	4,760	−33·2
Udasi	2,031	2,661	+31·01
Fakir	2,763	10,606	+283·9
Sanyasi	5,652	1,381	−75·6
Jogi	7,339	2,650	−63·9
Gorakh Panthi ..	2,415	1,277	−47·1
(b) Saint worshippers ..	345,318	139,573	−59·6
Dadu Panthi ..	1,324	386	−70·8
Gugapir	4,859	1,812	−62·7
Kabir Panthi ..	89,254	46,505	−47·9
Kalu Panthi ..	36,400	21,257	−41·6
Namabansi ..	972	5,471	+462·9
Pabuji	6,220	5,347	−14·1
Panjpiria	77,685	27,363	−64·8
Rai Dasia	106,770	27,158	−74·6
Ram Raya ..	2,001	201	−90
Sewak Darya ..	19,821	4,073	−79·5
(c) Orthodox Hindus ..	7,015,605	7,662,119	+9·2
Sanatan Dharm ..	7,015,605	7,662,119	+9·2

Sects.	1911.	1921.	Variation per cent.
2. SECTS WORSHIPPING MUSALMAN SAINTS IN ADDITION TO THEIR OWN GODS	232,413	89,231	−61·6
Sarwaria	230,988	88,837	−61·5
Shamsi	1,425	394	−72·4
3. SECTS OF LOW CASTES ..	981,311	914,424	−6·8
Balmiki	315,674	221,104	−30·0
Lalbegi	466,172	449,991	−3·5
Ramdasia	199,465	239,999	+20·3
Balashahi	..	3,330	+100
4. REFORMERS. ..	130,195	239,890	+84·3
Arya	100,783	223,153	+121·4
Brahmo	700	305	−56·4
Dev Dharm ..	3,094	3,597	+16·3
Nanak Panthi ..	21,756	9,723	−55·3
Radhasawami ..	3,862	3,112	−19·4
5. MISCELLANEOUS—			
(a) Miscellaneous sects ..	10,126	20,593	+103·4
(b) Castes returned as sects	17,715	20,445	+15·4
6. UNSPECIFIED ..	1,648	11,396	+591·5
7. SECTS ANALOGOUS TO OTHER RELIGIONS ..	11,964	4,196	−64·9

of the spread of education among the masses. The decrease in the number of Panjpirias and Rai Dasias is striking. It is difficult to suggest causes for the fall in the number of Panjpirias, but the loss of Rai Dasias seems to be due to the absorption of Chamars into Aryas. The number of persons registered under the head "sect worshipping Musalman saints" has gone down by 61·6 per cent., as the result of the tendency on the part of the Hindus to withdraw themselves from the influence of the Musalman *pirs*. The decline in the strength of the sects of low caste illustrates the process of conversion which has been thinning their ranks during the decade. The discussion of the figures of Aryas, Brahmos, and Dev Samajists will be found in the following paragraphs.

Aryas or Vedic Dharm.

96. The Arya or Vedic Dharm sect is the outcome of the religious movement founded by Swami Daya Nand Saraswati who inculcated monotheism and proclaimed the infallibility of the Vedas. The Aryas accept the Vedas as Divinely revealed and are opposed to idolatry. They also favour social reforms, such as the abolition of the custom of early marriage and the introduction of widow remarriage. In other words their aim is to purge Hinduism of what they consider later accretions. A full description of the tenets and rules of the sect is given in the Punjab Census Reports of 1891 and 1911, and needs no addition.

The strength of the members of the Samaj has been steadily increasing from 1877 when the Samaj was founded. In 1891, the adherents of the Samaj numbered 14,030 (8,103 males and 5,927 females). In 1911 the total number of Aryas was found to be 100,846 (57,956 males and 42,890 females). In 1901 separate statistics for Aryas were not prepared and hence the number cannot be ascertained. The number now recorded under one or the other of the following denominations:—Arya, Vedic and Vedic Dharm is shown in the margin. The increase in the number of Aryas seems to be largely due to the new process of proselytisation known as Shuddhi introduced by the members of the Arya Samaj. The majority of the converts are drawn from Brahmanic Hindus but special efforts are made to secure the re-conversion of converts from Hinduism to Christianity or Islam and the reclamation of the depressed classes. The theory of the submergence of caste in the Arya community appeals most to the lower classes, who look to the new system to raise their social status and to put them on the same footing as the higher classes. The conclusion is not inconsistent with the change in the numbers of persons who returned their caste as Aryas in 1911 and 1921. In 1911 only 213 persons were recorded as Aryas by caste while in 1921 the number returned under this head is shown in Table XIII (caste or tribe) as 50,884. The latter number probably includes a considerable number of low castes, who were allowed to return their castes as Arya, as the result of the efforts of the Shuddhi Sabha, Hoshiarpur, and of the Arya Prati Nidhi Sabha, Punjab.

Aryas returned in Punjab and Delhi as	Persons.	Males.	Females.
Sects of Hindus ..	223,153	124,852	98,301
Sects of Sikhs ..	15	8	7
Total ..	223,168	124,860	98,308

The followers of Vedic Dharm have been registered in all the districts and States of the provinces except the following:—Dujana, Bashahr, Jubbal, Loharu, Bilaspur and Suket. The districts where the Samaj has made great headway are noted in the margin. Rohtak is the only district which for the first time figures in the census records as the centre of the Arya Movement. The caste which has supplied the largest number of Aryas in this district is that of the Jat (23,995).

District.	Number of Aryas.
Rohtak	27,089
Karnal	13,312
Lahore	12,254
Gurdaspur	36,643
Sialkot	34,916
Delhi	12,281

Brahmo.

97. The number of Brahmos returned in both the provinces is 305, or 395 less than in 1911, a fact which indicates that the movement is losing ground. The actual number, however, cannot be taken as showing the extent to which the doctrines have ceased to attract fresh recruits. As noticed in 1911 Brahmos are not considered as outcastes from Hindu society, and find no difficulty in stepping back to the folds of orthodoxy, and thus the progress made, from time to time, in the numerical strength of the body is counteracted. Again, with the spread of English education and the inculcation of social reforms which formed the chief aim of the Samaj, the modernist Hindu feels no necessity to separate himself from the ranks of his co-religionists and enrol himself as Brahmo. Those who still declare themselves as Brahmo come mostly from towns, as appears from the statement drawn up in the margin for districts of the Punjab. The castes from which the members of this sect are chiefly recruited are Brahman (82), Khatri (74), Arora (37), Ghirath (18), Ahir (12) and Jat (10).

Districts.	Urban Area.	Rural Area.
Lahore	167	4
Simla	24	..
Montgomery	15	7
Hissar	16	2
Sheikhupura	13	..
Rawalpindi	10	..
Sialkot	8	..
Rohtak	5	3
Ambala	4	..
Gujranwala	4	..
Gujrat	1	..

There are three sections of Brahmos, *viz.*, the Adi Samaj, the Nababidhan Samaj, and the Sadharan Samaj. The Adi Samaj condemns idol worship, but favours the maintenance of the caste system so far as it does not conflict with religious beliefs. It practically adheres to the doctrines preached originally by Raja Ram Mohan Roy, the founder of the Brahmo Samaj. Its members style themselves Theistic Hindus, the chief difference between them and other Hindus being that they are Monotheists. The Nababidhan Samaj which owes its origin to Keshab Chandra Sen is less conservative and more eclectic. They consider the scriptures of other religions as sacred as well as their own. The most enlightened and advanced section is Sadharan Samaj, which discards caste distinctions and advocates the raising of the status of women.

Dev Samaj.

98. As is well known, this Samaj was founded in 1887 by Shri Pandit. Sattyanand Agnihotri who is also called "Shri Dev Guru Bhagwan" and "The Dev Atma." He declared that his life mission was to bring the reign of Truth and Goodness into this world by bringing changes into the minds and heart of mankind. When Shri Dev Guru Bhagwan proclaimed his life mission he had a sincere belief in the existence of "God," which he received from his ancestors, and this belief he held for about 12 years thereafter. But with the gradual evolution of his attachment to the ideals of Truth and Goodness, he found this belief to be *entirely groundless*, and *renounced it in* 1894, *just as he had done in the case of various other beliefs* which he had acquired from his *early surroundings*. A full account was given in the last census report to which the reader is referred for complete information regarding the teaching and development of the Samaj.

The Samaj has done very useful work during the decade in the spread of moral and literary education among the masses and the introduction of many social reforms. As many as 5,156 persons are reported to have pledged themselves to refrain from one or more such evils as dishonest dealing, bribe-taking, theft, repudiation of debts and deposits, gambling, and the use of intoxicants. Scores of persons are said to have made reparation of wrongs (Hani Parishodh) in various ways. In 1917 the Government made over to the Dev Samaj for reformation two settlements of criminal tribes in the Sialkot district. The efficient management of the Dev Samaj claims to have brought about remarkable changes in the lives of these notoriously criminal people. On the literary side the Samaj has opened 16 new schools, one High school for boys, 4 schools for the depressed classes, 4 schools for criminal tribes, 3 Primary and one Middle school for boys, and 4 Primary and Middle schools for girls, during the last 10 years. The special characteristic of these schools is that along with intellectual education, moral training is imparted in them. A new college named the Ramsukh Das College has recently been opened at Ferozepore by an esteemed member of the Dev Samaj, Shriman Gowardhan Das, B. A., Vakil, High Court, in memory of his father.

The total number of Dev Samajists in the provinces who returned their religion as such at the census was 3,597, as against 3,094 in 1911. The districts

and States registering the largest numbers are Ambala (778), Ferozepore (358), Sialkot (140), Lyallpur (406), Patiala (428) and Bahawalpur (1,493). There is, however, reason to believe that the number of followers of this Samaj is much greater than appears from the census returns. Thus in Lahore which is the centre of the movement the number has fallen from 133 to 71, which suggests a possible want of accuracy of the returns. Again in the Delhi Province none has been returned under this head—a very questionable result. The members of the Samaj belong to a number of different castes, the most strongly represented being Bania, Arora, Jat, Bawaria, Khatri, Saini and Brahman.

Section VI.—Sikhs.

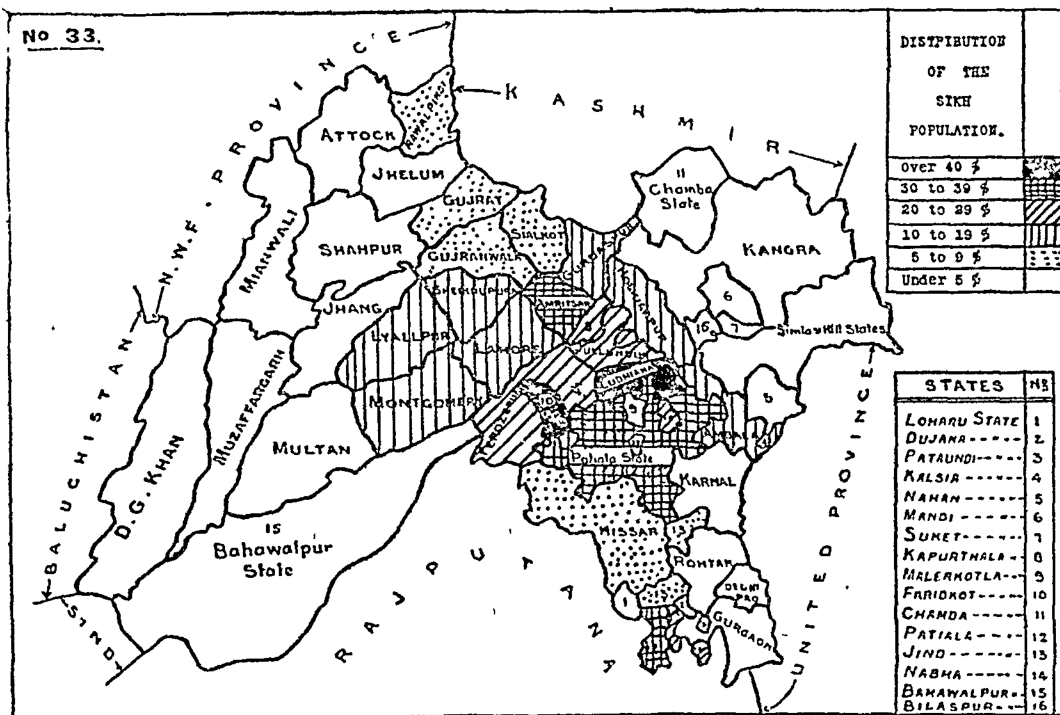
Meaning of the term Sikh.

99. It is very difficult to define Sikhism because it is not sharply divided from Hinduism as regards religious beliefs. The Sikhs, like the Hindus, believe in the transmigration of the soul, the law of Karma, and in the three modes of attaining union with the Supreme Being. The faith owes its origin to Guru Nanak, who flourished in the latter half of the 15th century of the Christian Era. Guru Nanak preached that there is only one true God, he condemned idol worship, proclaimed the futility of pilgrimages, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. Thus Guru Nanak strove not to found a separate religion as a revolt from Hinduism, but to reconcile the ancient beliefs with the purer creed. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century when the political tyranny of the Musalmans, and the social tyranny of the Hindus converted it into a militant creed. The momentous change was accomplished under the direction of Guru Govind Singh, the tenth and the last of Gurus. His teachings did not effect any material change in the Sikh creed so far as religious principles were concerned, but he tried to organise the Sikhs into a separate nation, and with this object ordained on them the observance of certain rules of conduct, and insisted on a definite ceremony of initiation (Pahol). The Sikh believer was required, besides accepting the religious doctrines of the earlier Gurus, to wear long hair and refrain from smoking. These two distinguishing features were taken as a standard for judging between Hindus and Sikhs at the Census of 1891. The rule was retained at the Census of 1901.

The difficulties experienced in the practical application of the definition led to its modification in 1911. In 1911 the statement of the persons enumerated regarding religion was accepted without question. The same rule was repeated at the present census because the term "Sikh" includes not only those who follow the ordinances of Guru Govind Singh, *i.e.*, Kesdharis, but also Sahjdharis. Both sections accept the tenets held by the Gurus and embodied in the Granth, and being strict monotheists repudiate the authority of the Vedas.

Local distribution.

100. The local distribution of Sikhs is illustrated by the map printed below. More than half the total population of Sikhs in the Punjab and Delhi



provinces, lives in the Indo-Gangetic Plain West where they represent 18·3 per cent. of the population. The four chief centres of the Sikh population are Ludhiana and Amritsar in the British Territory, and Faridkot and Patiala among Punjab States. In the Ludhiana district their relative strength is 415 *per mille* of the population, while Amritsar, which is the most important centre of Sikh religious activity, has 388 Sikhs to every 1,000 of population. The highest percentage of Sikhs (44·2) to the total population is met with in the Faridkot State, and Patiala follows next with 34·8 per cent. The other districts and States in which Sikhs are found in considerable numbers are Ferozepore, Jullundur, Nabha, Malerkotla and Kapurthala. The Sikh element is fairly strong in Lyallpur, Gurdaspur, Lahore, Sheikhupura, Ambala and Kalsia. Their proportion in these districts and States ranges between 164 to 139 *per mille*. The smallest proportion (5 per 10,000) is found in Mandi State in the Himalayan Division where Hindus predominate. There are no Sikhs in Loharu, Dujana and Pataudi States.

Variation. 101. The variation in the strength of Sikhs from one census to another is shown in the margin. It will be observed that Sikhism has made a very marked advance since 1881. The Sikhs now number 226,331 souls more than in 1911—an increase of 7·8 per cent.—whereas Musalmans and Hindus have increased only 5·5 and 4 per cent, respectively. Sikhs have made the greatest advance (9·8) per cent. in the Indo-Gangetic Plain West where their proportionate numbers, shown in the Subsidiary Table II appended to this Chapter, has risen since 1911 from 1,808 to 1,834 per 10,000 of the population. The reason for this relatively more rapid growth of Sikhs during the last decennium undoubtedly lies in the realisation by the Sikhs of the fact that their religion is quite independent of Hinduism, and the conversion to Sikhism of many of the depressed classes who formerly swelled the ranks of Hindus. The districts and States in which the largest increases in the number of Sikhs have occurred are shown in the margin. The closer examination of the figures reveals that Hindus have decreased in the districts and States which show a high percentage of increase among Sikhs. Statistics of conversion are not available but the figures of Sikh Chuhras and Mazhabis registered in the districts of Ferozepore and Amritsar suggest that untouchables are being fast absorbed into Sikhism as the result of the efforts of the Sikh preachers. The other contributory causes are possibly the frequency of widow remarriage, less disparity in the ages of husband and wife and consequently a higher birth-rate. Separate vital statistics for Sikhs are not available so that these causes cannot be examined in detail.

Census.	Actual number of Sikhs.	Variation per cent. in Sikhs.	Variation per cent. in Total population.
1881 ..	1,706,165	..	..
1891 ..	1,819,371	+8·4	+10·1
1901 ..	2,102,896	+13·7	+6·3
1911 ..	2,883,729	+37·1	−2·2
1921 ..	3,110,060	+7·8	+5·7

District or State.	Variation per cent. since 1911 in Sikh.	Hindu.	Total population.
Jullundur	+17·0	−7·7	+2·5
Ludhiana	+13·9	+3·2	+9·7
Ferozepore	+15·3	+11·9	+14·4
Amritsar	+13·0	−3·4	+5·5
Gurdaspur	+13·7	−8·9	+1·8
Kalsia	+28·1	−6·1	+2·6
Faridkot	+20·3	+3·3	+15·6
Kapurthala	+18·1	−4·9	+6·0

District.	Hindu. 1911	Hindu. 1921	Musalman. 1911	Musalman. 1921	Sikh. 1911	Sikh. 1921
Ferozepore ..	91,033	90,269	13,263	4,221	3,546	13,529
Amritsar ..	97,347	85,336	984	34	6,360	14,125

Growth of Sikh sects. 102. The history of the Sikh religion shows that till the time of the 9th Guru, Sikhism was never treated as a separate religion and its followers were not regarded as belonging to an alien religion by Hindus. A new form of baptism was introduced by Guru Govind Singh, which laid the foundation of a new sect in the Sikh religion. The Guru explained the doctrines of his new Khalsa religion to the Sikhs who were invited to attend the great Bisakhi fair at Anandpur in the year 1699. Thus "since the time of Baba Nanak, Charanpahol has been customary. Men drank the water in which the Gurus had washed their feet, a custom which led to great humility; but the Khalsa can now only be maintained as a nation by bravery and skill in arms. I now institute the custom of baptism by water stirred with a dagger, and change my followers from Sikhs to Singhs or Lions.

They who accept the nectar of the Pahol shall be changed before your very eyes from jackals into lions and shall obtain empire in this world and bliss hereafter. Let all embrace one creed and obliterate differences of religion. Let no one deem himself superior to another. Let none pay heed to the Ganges and other places of pilgrimages. Let men of the four castes receive my baptism, eat out of one dish, and feel no disgust or contempt for one another." The Guru ordained that his followers should wear the following articles, *viz.*, Kes (long hair), Kanga (a comb), Kirpan (a sword), Kachh (short drawers), and Kara (steel bracelet). Those who did not accept the Guru's baptism were termed Sahjdharis, thus splitting Sikhism into two broad divisions (1) Khalsas, (2) Sahjdharis. The tenth Guru when hard pressed by the Emperor Aurangzeb settled himself in Nadiar (Hyderabad State) where he happened to baptise one Madho Das, a Bairagi ascetic. Madho Das, known also as Banda, was recognised by Sikhs as their leader on the death of the Guru. He proclaimed himself as the eleventh Guru and reintroduced the old custom of "Charanpahol," and baptised a large number of Sikhs in this form. A majority of the Sikhs, however, did not accept the change and the result was, that four sub-sects arose in the Khalsa religion, *viz.*, (1) Sikhs, (2) Mazhabi Sikhs, (3) Tat Khalsas and (4) Bandia Khalsas.

The other important sub-sects of Khalsa are Akalis and Kukas. The word "Akali" literally means a God worshipper. Opinions differ as to the foundation of this sect. Some say that Ajit Singh was its founder, while others trace its growth to Guru Govind Singh's days. The blue dress of the Akali is said to have been suggested by a piece of blue cloth preserved by Guru Govind Singh in memory of his troubles, as a remnant of the dress which he wore in imitation of the robe of a Musalman saint, when he tried to escape from the Anandpur Fort, where he was besieged by the Mohammadan Army. The sect of Akalis has long been known as a militant organisation. Their headquarters were the Akal Bunga at Amritsar, and they claimed the leadership of the Khalsa.

The Kuka sect was founded by one Bulaka Singh, an Udasi, of Hazro in the Attock District. The doctrines were preached after the death of the founder by Ram Singh, a carpenter of Ludhiana district, who declared himself an incarnation of Guru Govind Singh. The Kukas differ from ordinary Sikhs in the manner of wearing the turban, and in carrying a necklace or woollen cord, divided into knots which serve as beads for prayer. They may be regarded as a puritanical Sikh sect. In addition to these sects there are two principal ascetic orders, namely Udasi and Nirmala. The Udasi sect was founded by Baba Siri Chand, the son of Guru Nanak, who is alleged to have been a born Yogi. Siri Chand was not installed on the Gaddi after the death of his father, but he was recognised as a leader and prophet by the Udasis, who refused to acknowledge Angad, who was elected to succeed Nanak, as a Guru. Under the leadership of Siri Chand, Udasis gathered enormous strength and formed themselves into a purely ascetic order. The Udasis are not uniform in their outward appearances. Some wear long hair, some have matted locks, while others shave their head and beard. The Nirmalas allege that their order was founded by Guru Nanak himself.

Strength of Sikh sects.

103. The statement given in the margin shows the numerical strength of the different sects returned in the provinces under the two main divisions—Kesdhari and Sahjdhari. It will appear that Kesdhari constitute the bulk of Sikh population, *i. e.*, about 92 per cent. of the total population of the Sikhs. The Sahjdharis represent 7 per cent. of the Sikh population. The districts where their number is largest are Montgomery (36,845), Jullundur (29,282) and Hoshiarpur (23,492). The remaining one per cent. is made up of the sects analogous to other religions and miscellaneous sects, Sadhu (575), Nirmala (112), Narankari (21), Gulab Dasi (74), Baba Kalu (87), Bedi Sodhi (61), Garib Dasi (5), Baba Gurditta (2), Nam Dev (7), Kabir Panthi (22) and Amraoti (16). Among Kesdharis the Tat Khalsas, Hazuris,

Sects.	Kesdhari.	Sahjdhari.
Govind Singh	42,678	..
Hazuri	246,384	1,613
Kuka Namdhari ..	4,037	..
Mazhabi	2,305	..
Nihang	3,954	..
Nanak Panthi	22,486	14,179
Panjpiria	4,592	..
Ram Dasia	10,568	209
Radhasawami	..	378
Ram Rai	605	..
Sarwaria	14,259	2,383
Tat Khalsa	531,290	..
Udasi	776	66
Unspecified	1,932,386	209,770
Total ..	2,876,320	228,598

and Nanak Panthis occupy prominent positions. The Patiala State being a Sikh State has the largest percentage of Tat Khalsas. The term though originally designed to denote the followers of Guru Govind Singh in opposition to the Bandia Khalsa, seems to have lost its historic significance, as the word Kesdhari is considered comprehensive enough to include the staunch disciples of Guru Govind Singh. It is for this reason that we find that in Amritsar, which is the principal centre of the Sikh religion, Sikhs have registered themselves under the general head "Kesdharis." Hazuris are both Sahjdharis and Kesdharis, the number being 246,384 Kesdharis, and 1,613 Sahjdharis. *Hazuris* follow the behests of Guru Govind Singh, and the appellation (as described in para. 219 of the Punjab Census Report 1911) is used for those who have been initiated at Hazur Sahib, in Hyderabad, Deccan, where the tenth Guru breathed his last. The Nanak Panthis number 22,486 Kesdharis, and 14,179 Sahjdharis. Etymologically the term covers all Sikhs, because the faith owes its origin to Guru Nanak, but in its popular sense it designates those persons who have not particularly attached themselves to the tenets of other Gurus. The only sect worth noticing under the head Sahjdhari is "Sarwaria." The distinguishing characteristic of the adherents of this sect is that they do not eat Jhatka meat.

Variation in Sects.

104. The variation in the different sects since 1911 is worked out in the marginal statement. In 1911, there were 2,048,014 Kesdharis; there are now 2,876,320, of whom 1,992,386 recorded themselves as such without mentioning any sub-sect. The Sahjdharis now aggregate 228,589 as against 450,823 in 1911. Thus compared with 1911 figures Kesdharis show an increase of 19·4 per cent. while Sahjdharis present a loss of 49·3 per cent. in their respective strengths.

Sects.	Strength of Sects. 1911.	Strength of Sects. 1921.	Variation per cent.
All Sects	2,883,729	3,110,060	7·8
Kesdharis	2,408,014	2,876,320	19·4
Govind Singh	107,827	42,678	—60·4
Hazuri	287,548	246,384	—14·3
Mazhabi	726	2,305	217·5
Nihang	4,270	3,954	—7·4
Nanak Panthi	99,601	22,486	—77·4
Panjpiria	10,372	4,595	—55·7
Ram Dasia	8,166	10,568	30·4
Ram Rai	20,686	601	—97·1
Sarwaria	53,205	14,259	—73·2
Tat Khalsa	344,058	531,296	54·4
Udasi	879	776	—11·7
Unspecified	1,466,030	1,992,386	35·9
Sahjdharis	450,823	228,589	—49·3
Hazuri	6,044	1,613	—73·3
Nanak Panthi	176,036	14,179	—91·9
Radhasawami	424	378	—10·8
Ram Rai	5,890	..	—100·0
Ram Dasia	2,266	209	—90·5
Sarwaria	25,850	2,383	—90·8
Udasi	591	66	—88·8
Unspecified	233,752	209,770	—10·3
Miscellaneous	17,550	1,812	—89·7
Sects analogous to other religions ..	7,333	3,336	—54·5

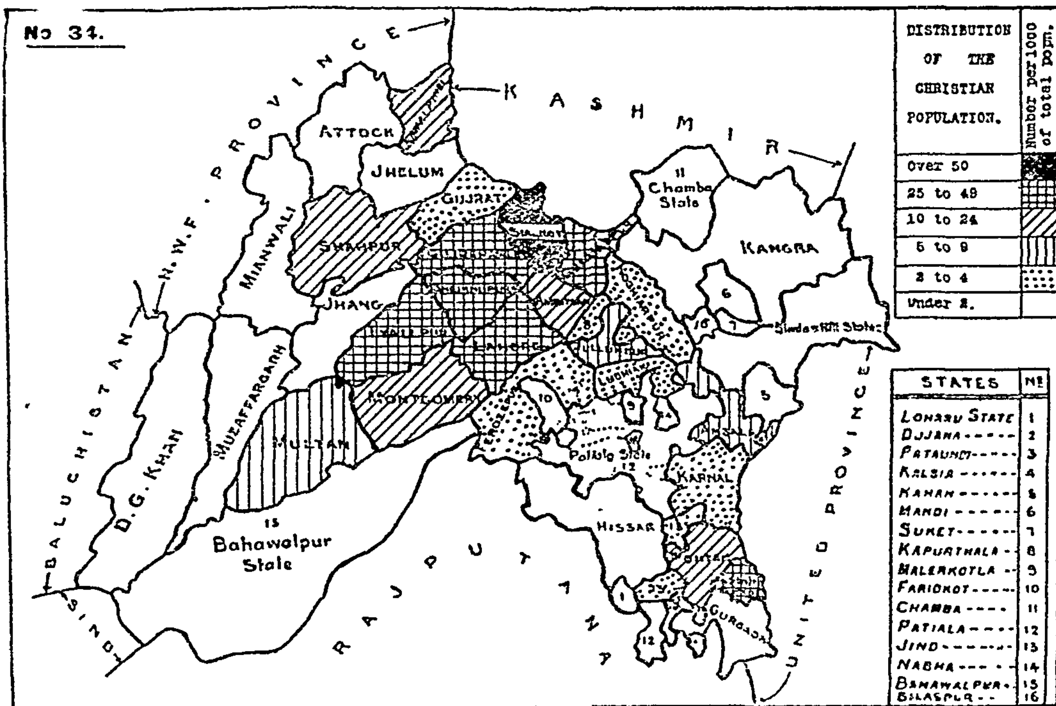
The abnormal increase in the number of Kesdharis seems to be mainly the result of accretion from the ranks of Sahjdharis and Hindus. The conclusion is borne out if we compare the figures of Kesdharis and Sahjdharis for districts and States which show the largest decreases in the strength of Sahjdharis. The figures are noted in the margin. It appears that the separatist movement, which was held largely responsible in 1911 for the increase in the number of Sikhs and for a corresponding decrease in the followers of Hinduism, has done a good deal during the past decade in popularising the tenets of Guru Govind Singh. The activities of Khalsas in spreading their religious doctrines were first observed at the end of the 19th century when a Singh Sabha was organised in Amritsar City. Its members were then reported to be busy, not only in the city, but also in rural areas, inculcating the principles of the Sikh faith and urging the necessity of a separate religious and political existence. A new movement was started by the Tat Khalsa between the years 1905 and 1912, which established a

District or City.	Sahjdhari. 1911.	Sahjdhari. 1921.	Kesdhari. 1911.	Kesdhari. 1921.
Ambala ..	12,052	6,009	82,333	91,429
Hoshiarpur ..	48,499	23,494	85,354	109,375
Jullundur ..	42,177	29,282	133,718	176,838
Ludhiana ..	17,020	5,597	189,520	230,124
Ferozepore ..	15,247	5,113	246,325	297,647
Amritsar ..	6,140	1,568	246,757	285,436
Gurdaspur ..	9,674	5,466	111,383	132,092
Sialkot ..	16,690	6,046	65,061	68,498
Lyallpur ..	24,875	7,986	121,276	152,827
Kapurthala ..	12,516	7,148	41,759	56,926
Malerkotla ..	3,729	349	17,287	21,479
Patiala ..	67,163	7,532	465,119	514,774
Jind ..	1,152	85	21,414	27,932

central institution called the "Chief Khalsa Dewan." The objects of this Association are fully described on page 157 of the Punjab Census Report, and need not be recapitulated. It had its branches in nearly all districts and States of the Punjab, and its scope was limited more or less to social and religious organisation and reformation. It is due to the untiring zeal of the members of this religious body that the Tat Khalsa show an increase of 54·4 per cent., whereas other minor sects have lost their separate existence. The third association which is of recent birth is known as "Sharomani Gurdawara Parbandhak Committee." It is an unregistered body and its aims and objects are declared to be (1) to arrange for the management of the Sikh Shrines in accordance with the principles of Sikhism and Panthak Jathedari, (2) to introduce and maintain the Guru doctrines in all the Gurdawaras, (3) to provide, if necessary, and to make arrangements for the imparting of religious and moral education. The Committee chiefly represents the Akali sects, but has received support from Sikhs generally in its campaign for the control of Sikh shrines, in which it has attained a considerable measure of success.

Section V.—Christians.

105. The map printed below shows the local distribution of Christians. There are now 346,259 Christians in the provinces, or 13 *per mille* *The local distribution of Christians.*



of the total population. Of these 7·6 per cent. belong to European and allied races, 1·4 per cent. are Anglo-Indians, and 91 per cent. Indian Christians. Nearly half the total number of Christians are found in the districts and States of the Indo-Gangetic Plain West, chiefly in Gujranwala, Lahore and Sheikhupura, where their proportion per ten thousand of the population ranges between 448 and 411. Next in importance comes the Sub-Himalayan tract which contributes more than one-third of the total Christian population of the provinces. The districts of this tract in which they are chiefly settled are Sialkot and Gurdaspur, where they constitute 7 and 4 per cent., respectively, of the population. The districts in the North-West Dry Area which contain a fair proportion of Christians are Lyallpur, Shahpur and Montgomery. Proportionately the greatest number of Christians is found in the Simla district (84 per cent.), and the smallest in the Dera Ghazi Khan district (1 per 10,000) in British Territory. No Christian was returned in Dujana, Pataudi, Jubbal and Loharu States.

Variation.

106. The Christian community has almost doubled itself during the last decade. While in 1911 there were 199,751 Christians in both the provinces, the number now registered is 346,259, or 73·3 per cent. more than in 1911. The inset table gives the variation exhibited by the different racial sections of the Christian population since 1911. There has occurred an actual decrease in European Christians which is probably due to the reduction of the British Army in India, and to diminished commercial activity. As would appear from the figures noted in the margin, the decrease is mostly confined to the districts containing Military Cantonments. *It may also be possibly* due to some extent to the partial replacement of Europeans by Indians in both the higher and subordinate services.

Race or Nationality.	1911.	1921.	Variation per cent.
All races	199,751	346,259	73·3
Europeans and allied races	32,278	26,313	−18·5
Anglo-Indians. ..	3,479	4,915	41·3
Indian Christians ..	163,994	315,031	92·1

District.	1911.	1921.	Decrease in strength.
Ambala	5,914	1,403	4,811
Jullundur	1,285	764	521
Ferozepore	2,098	1,224	874
Lahore	4,796	3,847	949
Sialkot	2,287	1,800	487
Rawalpindi	7,054	6,226	828

The increase in the number of Anglo-Indians, as compared with 1911, is, in all probability, partly due to some Anglo-Indians who recorded themselves as Europeans at the last census, having returned themselves under their proper designation, and partly to a growing tendency among Indian Christians to pass themselves off as Anglo-Indians. The above mentioned facts are proved by the increase registered in Anglo-Indians in the age group 30 and over, which is 502, or more than one-third of the total increase shown by this community within the last ten years.

The great rise in the number of Indian Christians between 1911 and 1921 affords a striking indication of the increase in missionary activity during the decade. In 1881 the total number was 3,796. In 1891 Indian Christians numbered 19,547, and a decade later the number rose to 37,980. The increase since 1901 has been more than maintained, and the present census shows 315,031, or an increase of 311,235, since 1881.

The districts and States in which Christianity has made the greatest development during the decade are named in the margin. The increase in Hissar, Rohtak and Karnal districts is due mainly to the zeal and activity of the Methodist Episcopal Mission. In Kapurthala the increase appears to be the work of the Punjab Mission of the American Presbyterian Church. In Gujrat and Amritsar the Church of Scotland Mission, and the Church Missionary Society have done useful work. In Montgomery several missions are reported to have brought about the result, the chief among them being the Associated Reformed Presbyterian Mission.

District or State.	1911.	1921.	Absolute increase.
Hissar	273	1,024	751
Rohtak	334	10,033	9,699
Karnal	982	3,320	2,338
Kapurthala.. ..	107	1,100	993
Amritsar	4,763	12,773	8,010
Gujrat	570	2,373	1,803
Montgomery ..	581	104,008	9,827

Strength of sects.

107. Detailed figures for the Christian sects are given in Imperial Table XV, and the totals for the provinces are noted in the margin. The Presbyterians constitute the bulk of the Christian population of the Punjab, representing 40 per cent. thereof. Out of 134,063 followers of this sect found in both the provinces, 1,349 or 1 per cent. are Europeans, 110, or less than 1 per cent. are Anglo-Indians, and 132,604, or 98 per cent. are Indian Christians. They have been returned from all the districts of the Punjab, notable exceptions being the Hissar, Rohtak, Gurgaon, Multan, Muzaffargarh and Dera Ghazi Khan districts. The districts where they are found in over-whelming majority

Sect.	Punjab.	Delhi.
Abyssinian	1	..
Anglican Communion ..	63,437	5,937
Armenian	107	..
Baptist	1,378	1,178
Congregationalist	31	..
Greek	3	..
Lutheran	36	3
Methodist	33,059	2,985
Minor Protestant Denomination	6,631	145
Presbyterian	133,956	107
Protestant (Unspecified) ..	16,484	560
Quaker	1	..
Roman Catholic	38,215	2,010
Salvationist	38,115	5
Syrian	26	..
Sect not returned	1,450	390

are Lahore, Sialkot, Gujranwala, Sheikhupura and Montgomery. Anglicans come next in point of numerical strength to Presbyterians, numbering 69,374, of whom 26 per cent. are Europeans, 4 per cent. Anglo-Indians, and about 70 per cent. Indian Christians. The districts where they are most numerous being Lahore (11,376), Gujranwala (10,287) and Lyallpur (10,045). Roman Catholics rank third, their number being 40,225. Of these 12 per cent. are Europeans, 4 per cent. Anglo-Indians, and about 84 per cent. Indian Christians. The important centres of the mission are the Sialkot and Lyallpur districts. The number of Salvationists is almost equal to that of Roman Catholics, there being 38,123 persons of whom 38,091 are Indians, the balance representing the number of European Officers in charge of the mission work in the Punjab. The largest number of Salvationists is found in Gurdaspur (16,334), Lyallpur (8,755) and Amritsar (6,112). Methodists number 36,044 of whom 35,667 are Indians, 331 Europeans and 46 Anglo-Indians. They are confined mostly to the districts of the Ambala and Lahore Divisions of the Punjab. Other important sects are Abyssinian (1), Armenians (107), Congregationalists (31), Greek (3), Lutheran (39), Quaker (1), and Syrian (26).

The sects included under the heading "Minor Protestant Denominations" are the American Church of God Mission (3,944), Brethren in Christ Mission (17), Church of Christ Mission (1,456), Church of India (11), Mennonite Mission (123), and Seventh Day Adventists (1,165).

The entries which did not indicate any particular set of beliefs or where the word "Protestant" was only put down in the column for sects, were included in "Unsectarian or Unspecified Protestants." The detail is given on the title page to Table XV.

Variation in sects.

108. The figures of Christian sects for 1921 are compared with those of 1911 in the margin. There has been since 1911 an important increase in the strength of all sects except Greek, Lutheran, and Quakers, the slight decrease in which seems to be due to the absence of missionary organisation. Anglicans have increased from 53,427 to 69,374 or 29·8 per cent. The number of Europeans, however, returned under this head is comparatively small, being 18,471, a decline of 3,778 as compared with the figures of 1911, and the increase is made up of 638 Anglo-Indians and 19,087 Indians. The decrease among Europeans is due to the causes discussed in paragraph 106 above. The districts which have shown the largest increases are Lahore (5,906), Amritsar (2,937), Sialkot (2,557) and Delhi (3,987). Decreases have taken place in the districts of Ambala (2,546) and Rawalpindi (963). Armenians now aggregate 107 as against 12 in 1911. Baptists have increased by 1,216 during the past decade. The number of Europeans, however, has fallen from 186 to 127, but the number of Anglo-Indians and Indian members of this sect has increased from 1,154 to 2,429. Increases have occurred mainly in Delhi and in the Ambala district and Patiala State. Congregationalists show an increase of 6, and Greeks a decrease of 15. The number of Methodists has risen from 12,850 to 36,044, an increase of 180·5 per cent. An increase has occurred among Indian Christians, chiefly in Rohtak (9,267), Lahore (5,613) and Gurdaspur (2,159). The high percentage of increase under "Minor Protestant Denominations" is due to the inclusion in this sect of 3,944 persons, who returned themselves as members of American Church of God Mission. The strength of Presbyterians has increased by 39,024 or 41·1 per cent. Notable increases have taken place in Jullundur (1,875), Lahore (9,626), Gujranwala (9,100) and Montgomery (3,471). Their number has fallen in the districts of Lyallpur and Shahpur by 2,141 and 4,541, respectively, owing to the emigration of Indian Christians from these districts to the newly colonised districts of Montgomery and Sheikhupura. Roman Catholics have increased during the last ten

Sect.	1911.	1921.	Percentage of variation 1911 to 1921.
All Denominations	199,697	346,259	73·4
Abyssinian	..	1	100·0
Anglican Communion ..	53,427	69,374	29·8
Armenian	12	107	791·7
Baptist	1,340	2,556	90·7
Congregationalist ..	25	31	24·0
Greek	18	3	−83·3
Lutheran	115	39	−66·1
Methodist	12,850	36,044	180·5
Minor Protestant Denominations	1,479	6,776	358·1
Presbyterian	95,039	1,34,063	41·1
Protestant (Unsectarian) or (sect not specified)	930	17,044	1732·7
Quaker	3	1	−66·7
Roman Catholic ..	15,847	40,225	153·8
Salvationist	18,073	38,123	110·9
Syrian (Jacobite) ..	1	26	2,500·0
Sect not returned ..	538	1,846	243·1

years, by 24,378, or 153·8 per cent. Towards this increase Anglo-Indians have contributed 507, and Indian Christians 25,360. The number of European members has gone down from 6,310 to 4,821 or 23·6, per cent. The districts in which the largest number of converts have been secured are Sialkot (7,003), Montgomery (3,424) and Lyallpur (7,685). Salvationists have added 20,050 persons to their number since 1911. The increase is chiefly represented by Indian Christians. The number shown under "Sects not returned" and "Unspecified Protestants" is larger than in 1911 in spite of every effort to obtain as correct a return of the Christian Sects as possible. Missionary societies were asked to give slips to their converts showing the name of the Church to which they belonged so that uneducated Indian Christians might know what entry they should make, but the result was not satisfactory.

Section VI.—Minor Religions.

Jain.

109. Jainism was originally a sect of Hinduism, and even now the boundary line between the two religions is indeterminate. Jains are still regarded as a recognised section of Hindu Society, and consequently many Jains returned themselves as Jain Hindus in spite of clear instructions to the contrary. There are now 46,019 Jains in these Provinces, or 756 less than in 1911. The decrease seems chiefly to be due to some Jains having recorded themselves as Hindus. It is also possible that they are not so prolific as other constituents of the population owing to their living in towns, being engaged in sedentary occupation, and abstaining from nourishing food, such as meat and eggs. Nearly half the total number of Jains in the Punjab are settled in the districts of the Ambala Division, chiefly in Hissar, Rohtak and Karnal. There are 4,698 Jains in the Delhi Province principally belonging to the Bania class. Other districts and States of the Punjab which possess a fair number of Jains are Patiala (3,249), Sialkot (2,147), Ludhiana (1,796), Jind (1,548), Amritsar (1,375), Ferozepore (1,211), and Hoshiarpur (1,079).

There are two main sects of Jains, known as Digambars and Swetambars. The important sub-sects are Dhundia and Sathanakwasi. About 44 per cent. of Jains are Digambaris, and 53 per cent. Swetambaris of all kind. 3 per cent. did not return any sect and were grouped under the head "miscellaneous."

Buddhist.

110. Of 5,918 Buddhists enumerated, 3,019 belong to the Kangra district and 2,052 to Bashahr State. The rest are distributed in the districts noted in the margin. Their number has declined from 7,690 to 5,918 since 1911, and the decrease is shared chiefly by the Kangra district (873), and Bashahr State (636). The decrease in the Kangra district may be due to migration, but in the Bashahr State the loss seems to be part of the general decrease of 3 per cent. in the population.

Ambala	5	Shahpur	2
Simla	20	Nahan	10
Ferozepore	6	Bilaspur	76
Lahore	170	Chamba	541
Amritsar	5	Patiala	3
Gurdaspur	3	Delhi	6

Parsi.

111. The number of Parsis according to the recent census is 598 or 8·4 per cent. less than in 1911. They are generally immigrants from Bombay and their principal occupation is trade. The districts and States in which their strength is more than 10 are noted in the margin. The decrease in their numbers since 1911 seems to be due to migration.

Ambala	30	Gurdaspur	12
Simla	36	Sialkot	27
Ludhiana	19	Rawalpindi	41
Ferozepore	15	Multan	47
Lahore	179	Patiala	21
Amritsar	58	Delhi	72

Jew.

112. The Jews, very few of whom are domiciled Indians, have decreased from 54 to 36. They have been chiefly recorded in Lahore (13), and Delhi (17), where Government Offices and Military Cantonments are located.

Indefinite beliefs.

113. The term includes all those persons who did not profess to belong to any religion, but returned themselves as Atheists, Agnostics, etc. At the previous census they were included among Christians, but now they have been excluded from the Christians in Table VI, and shown separately under the instructions of the Census Commissioner. Their number is 15 of whom 12 are Europeans, 1 Anglo-Indian, and 2 Indians.

I. General distribution of the population by religion. II. Distribution by districts of the main religions. III. Christians, Number and Variation. IV. Religions of Urban and Rural Population.

SUBSIDIARY TABLE I.

General distribution of the population by religion.

Religion and Locality.	Actual number in 1921.	Proportion per 10,000 of population in.					Variation per cent. Increase (+) Decrease (—).				Percentage of net variation.
		1921.	1911.	1901.	1891.	1881.	1911—1921.	1901—1911.	1891—1901.	1881—1891.	1881—1921.
1	2	3	4	5	6	7	8	9	10	11	12
MUSALMAN	12,955,141	5,063	5,075	4,922	4,739	4,758	+5·5	+0·8	+12·5	+9·7	+31·2
Indo-Gangetic Plain West ..	4,491,944	1,756	1,714	1,810	1,804	1,808	+8·4	—7·5	+8·7	+9·9	+19·7
Himalayan	77,425	30	31	31	32	34	+4·3	—3·0	+4·9	+3·2	+9·6
Sub-Himalayan ..	3,587,246	1,402	1,468	1,512	1,652	1,692	+1·0	—5·1	—·9	+7·5	+2·2
North-West Dry Area ..	4,798,526	1,875	1,862	1,569	1,251	1,224	+6·5	+16·0	+35·9	+12·6	+89·0
HINDU	9,125,202	3,566	3,628	4,179	4,408	4,384	+4·0	—15·2	+2·7	+10·7	+·3
Indo-Gangetic Plain West ..	5,061,511	1,978	1,981	2,354	2,479	2,398	+5·7	—17·8	+2·9	+13·8	+1·7
Himalayan	1,642,176	642	674	646	682	703	+·7	+2·0	+2·6	+6·8	+12·6
Sub-Himalayan ..	1,556,703	608	657	825	988	1,041	—2·0	—22·2	—9·5	+4·5	—27·9
North-West Dry Area ..	864,812	338	316	354	259	242	+13·1	—12·8	+48·1	+18·2	+72·6
SIKH	3,110,060	1,216	1,192	849	809	822	+7·9	+37·1	+13·7	+8·4	+82·3
Indo-Gangetic Plain West ..	2,189,193	856	824	648	624	670	+9·8	+24·2	+12·6	+2·5	+57·4
Himalayan	7,610	3	3	1	2	1	—3·6	+102·6	—6·5	+55·5	+184·0
Sub-Himalayan ..	570,759	223	234	142	161	137	+·9	+61·3	—5·0	+29·7	+100·6
North-West Dry Area ..	342,498	134	131	58	22	14	+8·2	+121·4	+185·7	+78·6	+1,122·3
CHRISTIAN	346,259	135	83	27	21	14	+73·3	+200·0	+37·4	+72·8	+1,134·3
Indo-Gangetic Plain West ..	153,424	60	24	9	7	6	+162·4	+164·5	+40·0	+34·6	+1,208·1
Himalayan	4,471	2	2	1	1	2	+1·6	+28·8	—4·4	—7·0	+16·4
Sub-Himalayan ..	117,172	46	38	12	12	5	+26·6	+209·2	+11·4	+159·3	+1,030·7
North-West Dry Area ..	71,192	27	19	5	1	1	+60·5	+298·1	+395·5	+6·0	+3,254·9
JAIN	46,019	18	19	20	20	20	—1·6	—6·4	+9·7	+7·1	+8·1
Indo-Gangetic Plain West ..	38,213	15	16	17	17	18	—2·3	—6·6	+9·8	+4·5	+4·8
Himalayan	356	..	..	..	..	..	—·6	—25·9	+24·5	—27·6	—33·6
Sub-Himalayan ..	6,866	3	3	3	3	2	+2·6	—8·0	+3·7	+34·1	+31·3
North-West Dry Area ..	584	..	..	..	..	..	—4·4	+77·1	+721·4	—87·1	+79·1
BUDDHIST	5,918	2	3	3	3	2	—23·0	+10·8	+11·3	+91·8	+82·0
Indo-Gangetic Plain West ..	190	..	..	..	..	..	+43·9	+4,300·0	..	—100·0	+18,900·0
Himalayan	5,718	2	3	3	3	2	—23·9	+8·5	+11·1	+91·9	+75·9
Sub-Himalayan ..	8	..	..	..	..	..	—27·3	+83·3	*	..	*
North-West Dry Area ..	2	..	..	..	..	..	—93·1	..	..	..	*
PARSI	598	..	..	..	..	..	—8·4	+36·9	+31·0	—11·9	+44·8
Indo-Gangetic Plain West ..	390	..	..	..	..	..	—5·3	+37·8	+14·6	+87·8	+180·6
Himalayan	40	..	..	..	..	..	+122·2	+157·1	—46·2	+225·0	+900·0
Sub-Himalayan ..	111	..	..	..	..	..	—27·0	+29·9	+53·9	—62·0	—44·5
North-West Dry Area ..	57	..	..	..	..	..	—19·7	+31·5	+285·7	—80·0	—18·6
JEW	36	..	..	..	..	..	—33·3	+50·0	—36·8	..	—36·8
Indo-Gangetic Plain West ..	31	..	..	..	..	..	+10·7	—9·7	—22·5	—18·4	—36·7
Himalayan	1	..	..	..	..	..	—66·7	*	—100·0	*	*
Sub-Himalayan ..	1	..	..	..	..	..	—94·1	+240·0	—54·5	+1,000·0	..
North-West Dry Area ..	3	..	..	..	..	..	—50·0	*	—100·0	—85·7	—57·1

* NOTE.—There being no entries in the earlier decade, no comparison is possible.

SUBSIDIARY

Distribution by districts

District or State and Natural Division.	NUMBER PER 10,000 OF THE									
	Hindu.					*Musalman.*				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB AND DELHI	3,566	3,627	4,179	4,408	4,384	5,063	5,075	4,922	4,739	4,758
PUNJAB	3,506	..	..	..	.	5,105	..	..	..	..
INDO-GANGETIC PLAIN WEST (TOTAL)	4,241	4,344	4,864	5,028	4,894	3,764	3,759	3,742	3,658	3,690
INDO-GANGETIC PLAIN WEST (PUNJAB)	4,137	..	..	..	..	3,800	..	..	..	..
1. Hissar	6,713	6,730	6,969	7,073	6,798	2,644	2,716	2,584	2,565	2,730
2. *Loharu State*	8,718	8,699	8,703	9,000	8,888	1,273	1,291	1,289	1,000	1,103
3. Rohtak	8,152	8,320	8,463	8,467	8,470	1,619	1,590	1,454	1,448	1,436
4. *Dujana State*	7,794	7,911	7,603	7,747	7,731	2,206	2,089	2,395	2,253	2,269
5. Gurgaon	6,747	6,559	6,692	6,803	6,844	3,180	3,378	3,250	3,138	3,094
6. *Pataudi State*	8,339	8,245	8,335	8,328	8,109	1,601	1,708	1,618	1,609	1,841
7. Karnal	6,917	6,954	7,060	7,310	7,286	2,843	2,812	2,733	2,511	2,508
8. Jullundur	2,978	3,309	4,011	4,197	4,284	4,457	4,452	4,588	4,556	4,542
9. *Kapurthala State*	2,055	2,291	2,979	2,985	3,282	5,644	5,673	5,673	5,691	5,660
10. Ludhiana	2,387	2,540	3,997	4,286	4,448	3,400	3,404	3,505	3,494	3,457
11. *Malerkotla State*	3,668	3,219	4,956	5,277	2,277	3,537	3,647	3,513	3,546	3,465
12. Ferozepore	2,789	2,853	2,913	2,844	2,592	4,394	4,362	4,472	4,567	4,774
13. *Faridkot State*	2,563	2,869	2,864	2,875	2,830	2,975	2,848	2,882	2,988	2,992
14. *Patiala State*	4,281	4,006	5,514	5,953	5,008	2,203	2,184	2,238	2,223	2,190
15. *Jind State*	7,616	7,737	7,516	8,112	8,430	1,404	1,381	1,373	1,353	1,371
16. *Nabha State*	5,084	5,079	5,389	5,832	5,102	1,927	1,849	1,965	1,924	1,916
17. Lahore	2,260	2,100	2,378	2,527	2,092	5,724	6,044	6,174	5,999	6,487
18. Amritsar	2,200	2,404	2,744	2,787	2,939	4,559	4,642	4,639	4,556	4,626
19. Gujranwala	1,629	1,907	2,241	2,409	2,064	7,106	6,740	7,028	6,890	7,337
20. Sheikhupura *	1,640	..	..	..	..	6,325	..	..	..	..
HIMALAYAN	9,450	9,453	9,460	9,470	9,474	445	430	453	443	459
21. *Nahan State*	9,429	9,405	9,469	9,531	9,578	459	434	473	395	377
22. Simla	7,331	7,387	7,509	7,580	7,551	1,534	1,480	1,654	1,602	1,615
23. *Simla Hill States*	9,545	9,492	9,541	9,629	9,574	311	320	337	325	364
24. *Bilaspur State*	9,796	9,832	9,805	9,836	9,854	159	151	164	154	146
25. Kangra	9,428	9,413	9,407	9,378	9,409	500	504	516	520	536
26. *Mandi State*	9,801	9,835	9,785	9,836	9,837	187	155	183	158	159
27. *Suket State*	9,871	9,880	9,877	9,907	9,865	121	107	122	92	132
28. *Chamba State*	9,198	9,293	9,335	9,343	9,361	742	644	652	608	592
SUB-HIMALAYAN	2,666	2,786	3,309	3,506	3,617	6,144	6,119	6,062	5,867	5,880
29. Ambala	5,431	5,516	6,252	6,104	6,482	3,019	2,974	2,950	2,911	2,850
30. *Kalsia State*	5,014	5,480	5,750	5,843	6,149	3,555	3,366	3,263	3,057	2,944
31. Hoshiarpur	5,395	5,428	6,099	6,040	6,104	3,119	3,068	3,162	3,249	3,219
32. Gurdaspur	3,037	3,394	4,048	4,201	4,362	4,962	4,878	4,928	4,863	4,752
33. Sialkot	2,324	2,474	2,786	3,315	2,957	6,190	6,174	6,615	6,120	6,617
34. Gujrat	759	663	924	951	1,051	8,612	8,729	8,738	8,797	8,816
35. Jhelum	730	670	872	834	1,034	8,866	8,840	6,867	8,910	8,768
36. Rawalpindi	1,005	884	927	939	1,050	8,257	8,362	8,632	8,661	8,667
37. Attock †	511	380	..	.	..	9,091	9,088	..	..	..
NORTH-WEST DRY AREA	1,423	1,358	1,784	1,691	1,632	7,895	8,000	7,901	8,159	8,268
38. Montgomery	1,328	1,248	2,372	2,432	1,969	7,188	7,467	7,215	7,245	7,749
39. Shahpur	1,142	1,058	1,306	1,338	1,400	8,280	8,330	8,449	8,462	8,487
40. Mianwali ‡	1,284	1,064	1,182	..	..	8,623	8,787	8,754	..	..
41. Lyallpur ‡	1,853	1,803	2,658	..	..	6,074	6,113	6,120	..	..
42. Jhang	1,496	1,424	2,103	2,024	1,642	8,332	8,195	7,803	7,885	8,270
43. Multan	1,505	1,554	1,879	1,943	2,029	8,218	8,167	8,025	7,981	7,897
44. *Bahawalpur State*	1,467	1,403	1,591	1,385	1,592	8,285	8,381	8,297	8,410	8,375
45. Muzaffargarh	1,229	1,197	1,287	1,328	1,279	8,679	8,691	8,632	8,600	8,638
46. Dera Ghazi Khan	1,140	1,072	1,170	1,291	1,285	8,834	8,906	8,803	8,671	8,676
DELHI	6,669	7,140	7,409	7,501	7,511	2,904	2,612	2,428	2,345	2,328
INDO-GANGETIC PLAIN WEST ..	6,669	7,140	7,409	7,501	7,511	2,904	2,612	2,428	2,345	2,328
1. Delhi	6,669	7,140	7,409	7,501	7,511	2,904	2,612	2,428	2,345	2,328

NOTE.—* Sheikhupura figures for 1911, 1901, 1891 and 1881 are

† Attock figures for 1901, 1891 and 1881 are included in Jhelum

‡ Mianwali and Lyallpur figures for 1891 and 1881 are not

TABLE II.

of the main religions.

POPULATION WHO ARE

Christian.					*Jain.*					*Sikh.*				
1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
135	88	27	21	14	18	19	20	20	21	1,216	1,192	849	809	822
133	..	..	..	..	16	..	..	..	..	1,238	..	..	..	..
129	53	18	14	12	32	35	35	34	36	1,834	1,808	1,340	1,266	1,368
123	..	..	..	..	29	..	..	..	..	1,910	..	..	..	..
13	3	3	3	1	72	72	77	73	55	558	478	366	285	[illegible]
..	..	..	..	..	9	10	6	..	8	..	..	..	..	..
130	6	1	1	1	91	81	81	81	90	8	3	1	3	3
..	..	..	..	..	..	..	..	..	..	..	..	2	..	..
19	12	4	2	1	40	45	52	55	59	14	5	1	2	2
..	5	..	..	4	60	42	47	63	45	..	..	..	..	..
41	12	13	2	1	51	53	54	59	75	148	169	139	118	129
59	30	19	18	21	9	11	11	6	9	2,506	2,198	1,371	1,221	1,144
39	4	1	0	1	8	8	7	6	8	2,254	2,024	1,339	1,318	1,049
28	17	14	6	5	32	36	33	31	35	4,153	4,003	2,450	2,183	2,055
5	2	2	2	0	73	178	175	168	186	2,717	2,954	1,354	1,007	4,072
49	35	20	20	26	11	15	11	16	12	2,757	2,735	2,383	2,553	2,595
7	0	1	1	0	31	31	33	35	36	4,424	4,252	4,221	5,000	4,142
9	5	2	1	0	22	23	18	20	20	3,485	3,781	2,227	1,802	2,781
21	7	3	0	0	50	45	45	6	26	909	830	1,063	528	173
2	..	..	..	1	11	10	16	14	14	2,976	3,062	2,630	2,230	2,967
411	210	63	51	50	11	11	9	8	10	1,591	1,631	1,374	1,414	1,359
137	54	20	16	10	15	16	14	7	3	3,088	2,883	2,582	2,634	2,422
438	176	36	34	3	12	10	12	10	9	815	1,167	682	657	586
448	..	..	..	..	1	..	0	..	..	1,586	..	..	..	..
26	26	20	22	25	2	2	3	2	8	44	45	28	25	17
3	3	3	2	2	5	3	4	1	1	103	155	51	71	42
844	932	693	689	781	20	12	8	0	6	259	176	135	116	47
5	7	4	2	2	5	5	9	7	15	67	89	35	37	45
..	..	..	..	..	..	1	..	..	..	45	16	31	10	..
5	5	5	4	4	1	1	1	2	1	27	25	16	19	10
..	..	..	1	1	..	..	..	..	..	8	1	2	5	3
..	..	..	1	..	..	..	..	..	..	8	13	1	..	2
5	6	5	5	7	..	..	..	..	..	17	10	6	7	6
201	159	48	42	17	12	12	12	11	9	977	974	568	574	477
83	108	53	50	35	33	32	32	27	12	1,433	1,369	712	906	641
1	6	..	..	..	33	28	27	31	32	1,397	1,120	960	1,069	875
40	32	8	1	1	12	11	12	11	12	1,434	1,461	719	699	663
386	279	47	25	6	..	1	1	1	1	1,615	1,447	976	909	879
664	496	110	104	15	23	21	19	15	14	799	835	470	445	397
29	8	6	1	4	..	1	..	..	..	600	599	332	250	129
9	9	5	4	7	4	3	2	3	1	391	478	254	249	190
163	152	82	80	47	17	19	11	10	13	557	581	346	310	217
11	14	..	..	..	..	..	..	..	..	387	518	..	..	..
117	79	23	6	7	1	1	1	..	1	564	562	291	143	91
146	11	1	2	2	..	..	..	..	..	1,338	1,274	412	321	280
156	125	2	2	1	..	..	..	..	..	422	487	243	198	111
10	5	1	..	..	..	1	1	..	..	83	143	62	..	..
429	373	110	..	..	2	1	..	..	..	1,642	1,710	1,112	..	..
8	4	1	1	..	..	..	..	..	..	164	377	93	90	88
67	30	28	30	34	..	5	2	..	1	209	244	66	45	38
4	3	1	..	..	..	..	..	..	4	244	213	111	205	29
6	1	1	1	1	..	..	..	..	..	86	111	80	71	82
1	1	3	3	2	6	..	3	..	..	19	20	21	35	37
273	87	46	29	31	96	115	112	119	114	57	45	4	6	15
273	87	46	29	31	96	115	112	119	114	57	45	4	6	15
273	87	46	29	31	96	115	112	119	114	57	45	4	6	15

included in districts of Lyallpur, Gujranwala, Lahore and Sialkot.
and Rawalpindi Districts.
available.

SUBSIDIARY TABLE III.

Christian, Number and Variation.

District or State and Natural Division.	Actual number of Christians in					Variation per cent.				
	1921.	1911.	1901.	1891.	1881.	1911—1921.	1901—1911.	1891—1901.	1881—1891.	1881—1921.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB AND DELHI ..	346,259	199,751	66,591	48,472	28,054	+78·3	+200·0	+87·4	+72·8	+1,134·3
PUNJAB	332,939	..	..	..	..	+71·6	..	..	..	..
INDO-GANGETIC PLAIN WEST (TOTAL)	153,424	58,462	22,103	15,785	11,729	+162·4	+164·5	+40·0	+34·6	+1,208·1
INDO-GANGETIC PLAIN WEST (PUNJAB)	140,104	..	..	..	..	+165·5	..	..	..	..
1. Hissar	1,024	273	253	242	72	+275·1	+7·9	+4·5	+236·1	+1,322·2
2. *Loharu State* ..	..	..	..	..	..	..	..	..	..	..
3. Rohtak	10,033	334	80	55	34	+2,903·9	+317·5	+45·5	+61·8	+29,408·8
4. *Dujana State* ..	..	..	..	..	..	..	..	..	..	..
5. Gurgaon	1,316	782	278	152	70	+68·3	+181·3	+82·9	+117·1	+1,780·0
6. *Pataudi State* ..	..	9	..	..	7	−100·0	..	..	−100·0	−100·0
7. Karnal	3,382	920	1,179	120	85	+267·6	−22·0	+882·5	+41·2	+3,878·8
8. Jullundur	4,088	2,404	1,713	1,645	1,631	+70·0	+40·3	+4·1	+·9	+150·6
9. *Kapurthala State* ..	1,100	107	39	8	35	+928·0	+174·4	+387·5	−77·1	+3,042·9
10. Ludhiana	1,613	888	947	372	322	+81·6	−6·2	+154·6	+15·5	+400·9
11. *Malerkotla State* ..	37	14	12	15	3	+161·3	+16·7	−20·0	+400·0	+1,133·3
12. Ferozepore ..	5,365	3,342	1,908	1,738	1,686	+60·5	+75·2	+9·8	+3·1	+218·2
13. *Faridkot State* ..	107	6	11	13	..	+1,683·3	−45·5	−15·4	..	..
14. *Patiala State* ..	1,395	739	316	105	39	+88·8	+133·9	+201·0	+169·2	+3,476·9
15. *Jind State* ..	637	187	80	7	3	+240·6	+133·8	+1,042·9	+133·3	+21,133·3
16. *Nabha State* ..	41	5	7	10	18	+720·0	−28·6	−30·0	−44·4	+127·8
17. Lahore	46,454	21,781	7,296	5,483	4,614	+113·3	+198·5	+33·1	+18·1	+900·3
18. Amritsar	12,773	4,763	2,078	1,609	869	+168·2	+120·2	+29·1	+85·2	+1,369·8
19. Gujranwala ..	27,308	16,215	2,748	2,353	194	+68·4	+490·1	+16·8	+1,112·9	+13,976·2
20. Sheikhupura* ..	23,431	..	..	..	..	..	..	..	..	..
HIMALAYAN	4,471	4,400	3,415	3,571	3,840	+1·6	+28·8	−4·4	−7·0	+16·4
21. *Nahan State* ..	44	37	46	25	21	+18·9	−19·6	+84·0	+19·0	+109·5
22. Simla	3,823	3,666	2,798	3,078	3,353	+4·3	+31·0	−9·1	−8·2	+14·0
23. *Simla Hill States* ..	164	213	112	45	47	−23·0	+88·5	+151·1	−4·3	+248·9
24. *Bilaspur State* ..	4	11	1	..	..	−63·6	+1,000·0	..	..	..
25. Kangra	363	386	385	343	327	−6·0	+·3	+12·2	+4·9	+11·0
26. *Mandi State* ..	10	4	3	12	12	+150·0	+33·3	−75·0	..	−16·7
27. *Suket State* ..	..	2	..	3	..	−100·0	..	−100·0	..	..
28. *Chamba State* ..	63	81	70	65	80	−22·2	+15·7	+7·7	−18·8	−21·2
SUB-HIMALAYAN ..	117,172	92,524	29,930	26,867	10,363	+26·6	+209·1	+11·4	+159·3	+1,030·7
29. Ambala	5,679	7,483	4,362	5,204	3,773	−24·1	+71·5	−16·2	+37·9	+50·5
30. *Kalsia State* ..	4	31	..	3	1	−87·1	..	−100·0	+200·0	+300·0
31. Hoshiarpur ..	3,745	2,978	813	120	98	+25·8	+266·3	+577·5	+22·4	+3,721·4
32. Gurdaspur ..	32,832	23,365	4,471	2,400	463	+40·5	+422·6	+86·3	+418·4	+6,991·1
33. Sialkot	62,266	48,620	11,939	11,668	1,535	+28·1	+307·2	+2·3	+660·1	+3,956·4
34. Gujrat	2,373	570	460	114	255	+316·3	+23·9	+303·5	−55·3	+830·6
35. Jhelum	430	450	271	253	416	−4·4	+66·1	+7·1	−39·2	+3·4
36. Rawalpindi ..	9,286	8,320	7,014	7,105	3,822	+11·6	+9·3	+7·2	+85·9	+142·9
37. Attock†	557	707	..	..	..	−21·2	..	..	..	..
NORTH-WEST DRY AREA ..	71,192	44,365	11,143	2,249	2,122	+60·5	+298·1	+395·5	+6·0	+3,254·9
38. Montgomery ..	10,408	581	66	85	93	+1,691·4	+780·3	−22·4	−8·6	+11,091·4
39. Shahpur	11,270	8,616	91	80	29	+30·8	+9,368·1	+13·8	+175·9	+38,762·1
40. Mianwali‡	369	168	44	..	..	+119·6	+281·8	..	..	..
41. Lyallpur‡	42,004	32,023	8,672	..	..	+31·2	+269·3	..	..	..
42. Jhang	449	201	38	37	11	+123·4	+428·9	+2·7	+236·4	+3,981·8
43. Multan	6,006	2,441	1,964	1,892	1,861	+146·0	+24·3	+3·8	+1·7	+222·7
44. *Bahawalpur State* ..	283	199	83	11	13	+42·2	+139·8	+654·5	−15·4	+2,076·9
45. Muzaffargarh ..	356	60	33	27	33	+493·3	+81·8	+22·2	−18·2	+978·8
46. Dera Ghazi Khan ..	47	76	152	117	82	−38·2	−50·0	+29·9	+42·7	−42·7
DELHI§	13,320	..	..	..	..	..	..	..	..	..
INDO-GANGETIC PLAIN WEST	13,320	..	..	..	..	..	..	..	..	..
1. Delhi	13,320	..	..	..	..	..	..	..	..	..

NOTE.—*Sheikhupura figures for 1881, 1891, 1901 and 1911 are included in those of Gujranwala, Lyallpur and Sialkot.
†Figures of 1881, 1891 and 1901 are included in Jhelum and Rawalpindi Districts.
‡Figures of 1881 and 1891 are not available.
§Figures for Delhi province as now constituted are not available for previous censuses.

SUBSIDIARY TABLE IV.

Religions of Urban and Rural Population.

Natural Division.	Number per 10,000 of Urban Population who are					Number per 10,000 of Rural Population who are				
	Hindu.	Musalman.	Christian.	Jain.	Sikh.	Hindu.	Musalman.	Christian.	Jain.	Sikh.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB	**4,021**	**5,060**	**205**	**83**	**628**	**3,446**	**5,110**	**124**	**9**	**1,308**
I.—Indo-Gangetic Plain West	4,156	4,888	145	99	709	4,134	3,629	119	18	2,100
II.—Himalayan ..	7,178	1,846	672	27	262	9,526	398	4	1	36
III.—Sub-Himalayan ..	3,482	5,381	399	103	633	2,584	6,221	180	3	1,012
IV.—North-West Dry Area ..	3,793	5,689	123	9	385	1,236	8,069	117	..	578
DELHI	**5,726**	**3,768**	**289**	**127**	**87**	**8,230**	**1,472**	**246**	**46**	**5**
I.—Indo-Gangetic Plain West	5,726	3,768	289	127	87	8,230	1,472	246	46	5

CHAPTER V.

Age.

SECTION I.—THE AGE RETURNS.

114. Instructions to enumerators. 115. The actual ages returned at the Census, and comparison with 1911. 116. Comparison of Punjab (unselected), English (selected) and American (unselected) longevity. 117. The "Stationary" Population. 118. Persons over 40 years of age in various castes.

SECTION II.—VITAL STATISTICS.

119. Births and Deaths. 120. Ratio of female to male births. 121. Deaths in the Punjab, 1867—1921. 122. Deaths in Punjab Jails.

Section I.—The Age Returns.

Instructions to Enumerators.

114. The Instructions to enumerators which were printed on the cover of the enumeration book state "Column 7 (age)—Enter the number of years each person has completed. For infants less than one year, enter the word 'infant.'" The actual procedure adopted appears to have introduced at least 4 classes of cases. These were—

(1) Cases in which the person questioned gave his age at a figure which appeared reasonable to the enumerator.

(2) Cases in which the given age seemed improbable, and the enumerator then either put down the age estimated by himself or questioned some of the bystanders.

(3) Cases in which the person questioned gave two alternative ages, almost always differing by an even number, and the enumerator was left to make his own choice between them.

(4) Cases in which the enumerator questioned a third party, usually the head of the house, as to the ages of his family and, where, often the enumerator had no means of applying even the roughest check to the replies given.

Though the manner of obtaining the record of ages for entry in the census schedules, was thus, in itself, responsible for heterogeneity, it is doubtful whether any systematic procedure, with the material at present available, would produce any betterment of the returns. To record only the ages given by the persons questioned might make the returns even more inaccurate than they are. To record only the ages as estimated by the enumerators would certainly lead to large errors due to "personal equation." Possibly a definite instruction to the effect that where two ages are given (*e. g.*, 20 or 22 years, 60 or 70 years) the mean age, or the whole number next below the mean age, where the mean is a fraction, might help to limit the individual initiative of enumerators: but even this would be unlikely to lead to any appreciable improvement. The difficulties in the way of obtaining anything approaching the actual age-distribution of the population are thus almost insuperable, and no surprise need be felt at the abandonment by the actuary (Mr. Acland), at the 1911 Census, of the task of graduating the female returns, which are more entangled than even those of the males.*

The actual ages returned at the Census and comparison with 1911.

115. If we look at a histogram showing the frequency of the age-groups returned in the Punjab for each year of age, it must be admitted that it resembles the forest of factory chimneys of some big industrial town, rather than the falling outline of some smooth hill, whose curves swing easily down to the plain.

The outstanding chimneys are placed where those whose ages (at the last birthday), are recorded as a multiple of ten. The secondary chimneys are those for ages which are multiples of five, though that for age 25 actually overtops that for age 20, both for males and females. Smaller, but still prominent smoke-stacks arise at ages 12, 22, 32, 42, 52, 62 and 72, and so on down to the ages which terminate with a seven or unity, represented by the smallest of elevations.†

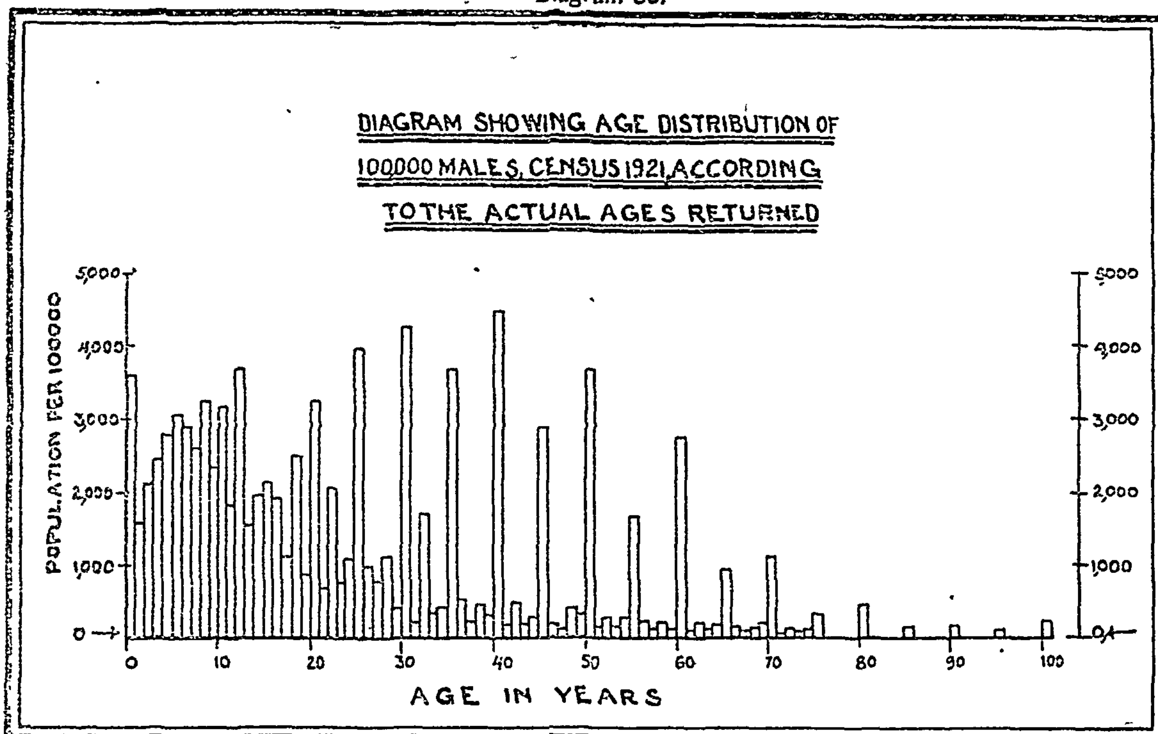
*No doubt as life insurance operations extend, it will be possible to get a clearer view of the age-distribution, but this can hardly help matters for many years to come. In the meantime the annual vital statistics might well contain the recorded deaths by each year of age, as this, with the recorded number of births, after correcting for the effects of migration, would allow of an independent calculation of the age-distribution.

†Mr. Acland in commenting on the preference for certain digits in the unit place to express ages, puts the order of preference as 0, 5, 2, 8, 6, 4, 3, 7, 1, 9.

In the Punjab the order would agree with this for the younger ages, but in the higher ages 9 is preferred in the unit place to either 7 or 1. The reluctance of an old man to enter a new decade might account for this phenomenon, if it is not the result of random sampling.

Truly over all these statistics of age hangs a dense curtain of fog and murkiness produced by those tall smoke-belching chimneys.

Diagram 35.



The great irregularity of the data is illustrated by the above diagram, which shows the recorded ages for each year, for males. The data for females are very similar, possibly due in part to the fact that the women's ages are very largely, if not wholly, the ages which the men select for them, and they naturally tend to choose the same ages for their womenfolk as they do for themselves.*

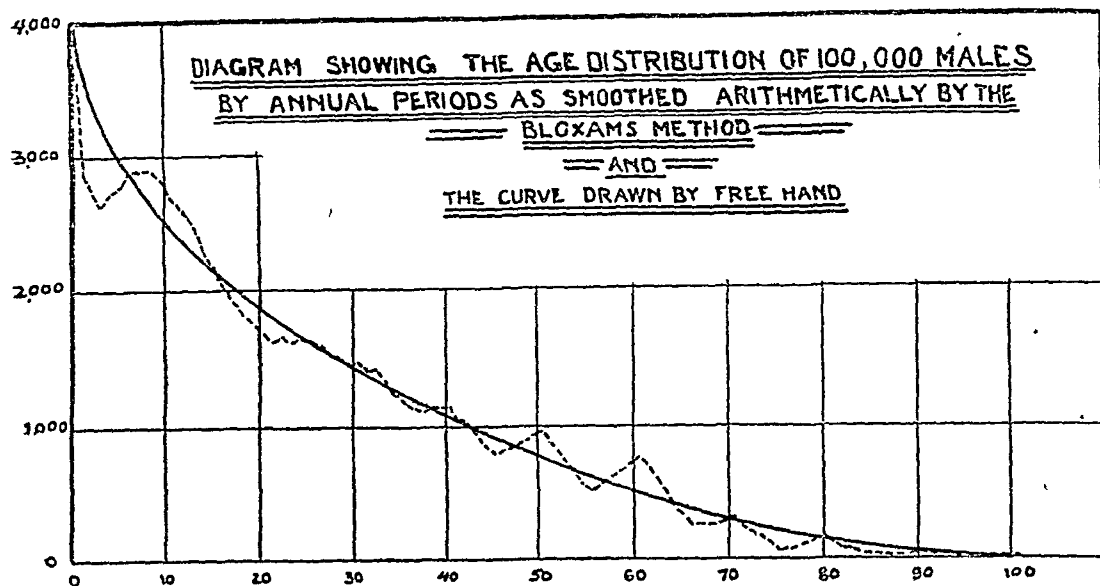
As so much uncertainty attaches to the age-distribution figures, it is of little use discussing them in detail until they have been graduated by the Government Actuary, and as his Report on the Punjab figures will not be available till after this Report has gone to press, the remarks made must not be interpreted as expressing any conviction on my part.

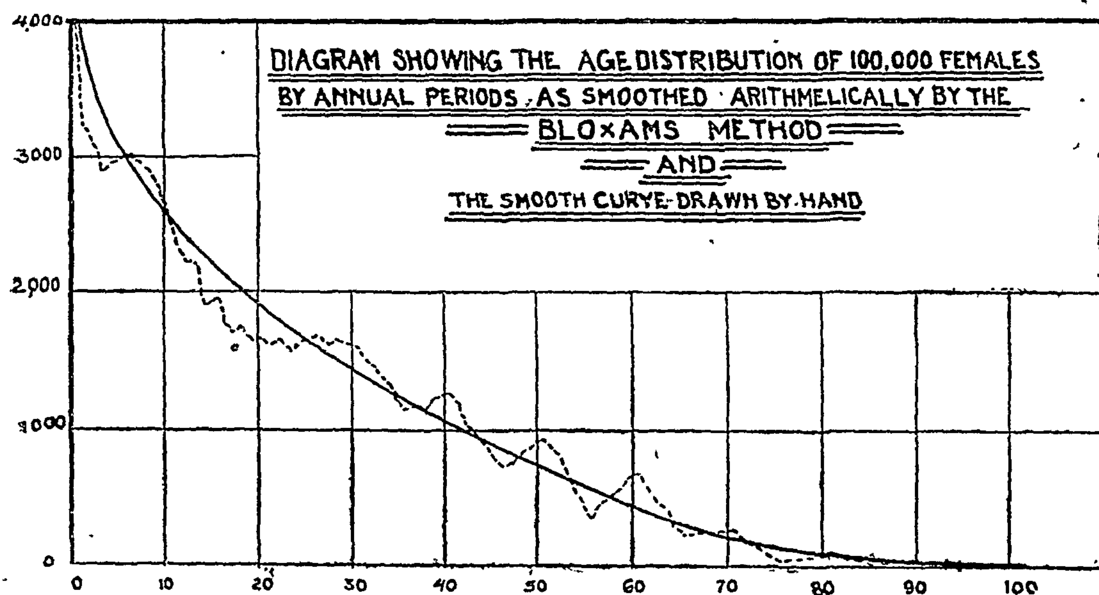
For form's sake I have had the age figures doubly smoothed by Bloxam's method, smoothed again by curve-drawing, as was done in 1911, and then given a final smoothing by adjusting the second differences. The results, which are exhibited in the diagrams on the opposite page, have a spurious appearance of validity, which is, in reality, quite illusive. One obvious defect from which the curves suffer is that they do not possess any points of inflexion, so that they differ, in this respect, from some properly constructed tables. For example, the Punjab Life Table, P Males, for 1911, has a point of inflexion at 38 years, the Agra and Oudh Tables for 1911 for Males and for Females, have points of inflexion at 29 and 28 years, respectively, while the American Experience Table has two points of inflexion.†

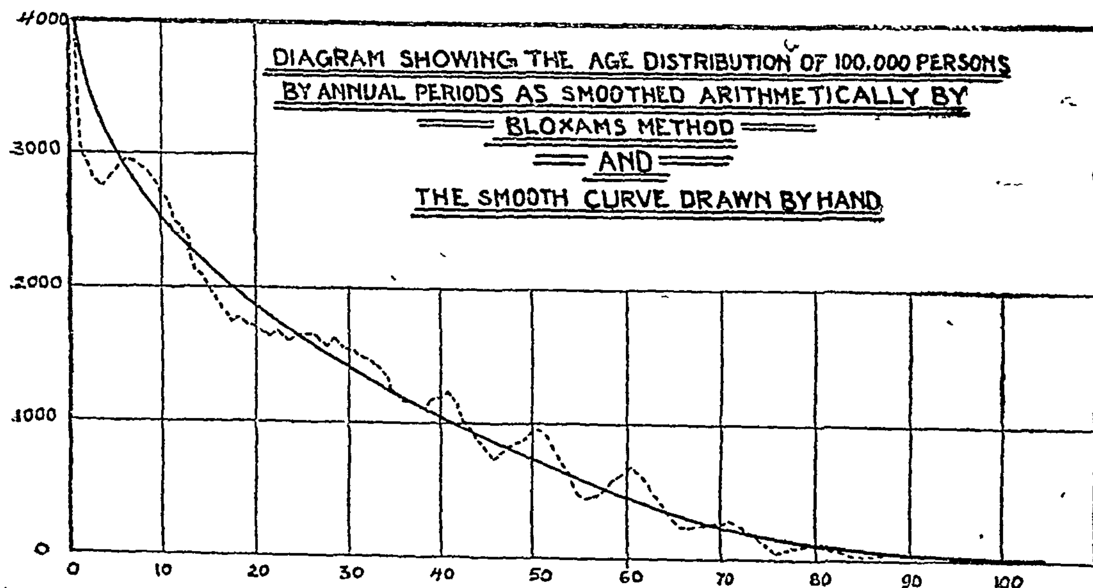
*In this connection it is noteworthy that according to Knibbs (page 112 of Appendix A to the Census of the Commonwealth of Australia 1911) "*inaccuracy of statement is more marked amongst the males than amongst females.*" The argument is based on the ratio of the recorded to the adjusted number of persons for each age unit.

†Makeham's law $l_x = ks^x g^{c^x}$ which is often used for graduating life-tables, leads to a curve with two points of inflexion, and there is no reason so far as I am aware, if the force of mortality at different ages varies enough, why there should not be several such points even in a "stationary" population. If there are more than 2 points of inflexion, Makeham's law will be, *pro tanto*, unsatisfactory.

Diagram 36.


DIAGRAM SHOWING THE AGE DISTRIBUTION OF 100,000 MALES BY ANNUAL PERIODS AS SMOOTHED ARITHMETICALLY BY THE BLOXAMS METHOD AND THE CURVE DRAWN BY FREE HAND
4,000
3,000
2,000
1,000
0
0
10
20
30
40
50
60
70
80
90
100


DIAGRAM SHOWING THE AGE DISTRIBUTION OF 100,000 FEMALES BY ANNUAL PERIODS AS SMOOTHED ARITHMELICALLY BY THE BLOXAMS METHOD AND THE SMOOTH CURVE DRAWN BY HAND
4,000
3000
2,000
1000
0
0
10
20
30
40
50
60
70
80
90
100


DIAGRAM SHOWING THE AGE DISTRIBUTION OF 100,000 PERSONS BY ANNUAL PERIODS AS SMOOTHED ARITHMETICALLY BY BLOXAMS METHOD AND THE SMOOTH CURVE DRAWN BY HAND
4000
3000
2000
1000
0
0
10
20
30
40
50
60
70
80
90
100

The observed numbers in the age-groups, and the smoothed values per 100,000 males, are reproduced in the statement below :—

Statement showing the age-distribution of 100,000 males by annual periods and their smoothing by Bloxam's method from Subsidiary Table I, Chapter V.

Age.	Number per 100,000 males.	First smoothing (Bloxam).	Second smoothing (Bloxam).	Final smoothing from curve and adjusted differences.
0	3,583	3,583	3,583	3,807
1	1,670	2,488	2,872	3,379
2	2,210	2,546	2,764	3,207
3	2,517	2,477	2,617	3,045
4	2,752	2,725	2,722	2,921
5	3,227	2,848	2,798	2,807
6	2,921	3,014	2,889	2,712
7	2,825	2,925	2,880	2,626
8	3,344	2,932	2,899	2,550
9	2,309	2,724	2,810	2,474
10	3,269	2,902	2,729	2,408
11	1,874	2,569	2,607	2,341
12	3,713	2,519	2,533	2,283
13	1,681	2,323	2,399	2,226
14	2,059	2,353	2,284	2,169
15	2,288	2,233	2,132	2,112
16	2,024	1,992	2,055	2,055
17	1,111	1,758	1,917	1,998
18	2,477	1,941	1,840	1,941
19	888	1,659	1,743	1,884
20	*3,203*	*1,852*	*1,700*	1,827
21	616	1,505	1,655	1,770
22	2,074	1,545	1,684	1,713
23	743	1,714	1,623	1,665
24	1,087	1,803	1,652	1,617
25	4,051	1,549	1,646	1,569
26	1,059	1,648	1,612	1,522
27	805	1,515	1,532	1,475
28	1,240	1,545	1,539	1,436
29	420	1,401	1,492	1,398
30	4,303	1,585	1,472	1,360
31	239	1,414	1,425	1,322
32	1,724	1,415	1,422	1,284
33	384	1,312	1,323	1,246
34	426	1,386	1,261	1,208
35	3,788	1,088	1,196	1,170
36	609	1,105	1,178	1,132
37	234	1,089	1,126	1,103
38	466	1,222	1,146	1,074
39	352	1,127	1,150	1,045
40	4,448	1,189	1,152	1,016
41	136	1,123	1,066	988
42	545	1,101	1,001	960
43	134	789	908	932
44	242	802	838	904
45	2,886	726	773	876
46	204	772	805	848
47	165	778	831	820
48	361	949	881	792
49	274	931	911	764
50	3,739	974	936	732
51	114	922	844	704
52	384	903	757	676
53	99	489	650	448
54	179	495	556	620
55	1,671	439	470	592
56	144	452	518	564
57	100	477	562	536
58	166	727	622	508
59	303	717	675	480
60	2,920	737	716	456
61	97	719	628	432
62	200	682	540	408
63	76	283	441	384
64	117	277	346	362
65	926	244	258	348

Age.	Number per 100,000 males.	First smoothing (Bloxam).	Second smoothing (Bloxam).	Final smoothing from curve and adjusted differences.
66	64	243	257	324
67	37	241	256	305
68	70	281	264	286
69	107	273	270	267
70	1,128	283	274	249
71	22	274	237	230
72	88	260	201	211
73	27	93	160	192
74	33	93	121	176
75	296	79	85	162
76	21	81	90	148
77	19	77	95	134
78	30	119	102	124
79	13	117	108	114
80	505	117	115	104
81	13	111	96	95
82	19	111	78	86
83	7	25	58	77
84	9	24	40	68
85	78	21	22	59
86	5	20	22	50
87	4	18	22	43
88	3	25	23	38
89	2	25	24	33
90	111	25	25	29
91	6	26	22	[illegible]
92	4	26	19	[illegible]
93	5	9	16	23
94	3	9	12	21
95	29	8	8	19
96	2	8	8	17
97	3	8	8	15
98	2	7	9	13
99	4	8	9	11
100	23	12	10	9
Over 100	9	9	9	7

The smoothed values for females, and for males and females together, have been calculated, but are not printed here, as the process adopted, has neither scientific validity*, nor, apparently, the sanction of actuarial usage.

We may pass on, then, to consider how the recorded ages by years differ from those given in 1911. Reference may be made to Subsidiary Table XI, which contains for each year of age the ratio of the number of males, females and persons per 100,000 as recorded in 1911 to the corresponding figures for 1921. A few salient points may be noticed. In the first place the ratios differ from unity, sometimes by a good deal, and there is a tendency for the ratios to be above or below unity for a number of consecutive ages. Thus for ages 4 to 11 (inclusive) fewer persons per 100,000 were recorded in 1911 than in 1921. From 12 to 51 there are more persons in 1911 than in 1921, while from 52 years and upwards till the age of 85 is recorded, there were again fewer persons in 1911 than in 1921. The possibility that there is a falling off in 1921 in the preference for the ages which are multiples of ten is suggested, but on the whole it is difficult to say whether the differences in the recorded ages are the result of the differential birth-rates n and n + 10 years ago, respectively, or of any change in the aptitude for misstatement which is a feature of all age-relations. The question could only be answered if the number of survivors for each year of age at each of the last 2 censuses, were calculated directly from the birth returns, and from the deaths each year *at each year of age*. A comparison of the ratio of the number of survivors so determined with the ratios of the recorded number of persons as given in Subsidiary Table XI, would show to what extent the variation of the ratios from unity is a physiological or a psychological characteristic.

*The effect of the smoothing produced by a double application of Bloxam's method is so great that, applying the process to the data of the 1881 and 1891 censuses, and adopting the smoothed results reached by the same method in 1901, there is no appreciable difference between the age-curves of any of the last 4 censuses. One only has to look at the varying number of births from year to year, to which has to be added the effect of a differential mortality, to realise how unlikely such correspondences would be.

116. There are many ways of summarising the results of a Life Table, so as to compare the chances of life of one population with that of another. The readiest way of doing so is to compare the expectations of life in the two communities. Two expectations may be made use of, (1) the actuarial expectation, which is the ratio of the number of persons of age x and over, to the number who reach age x, or what is the same thing, the average number of years lived by persons who reach age x; (2) the median expectation, which is the number of years after which a person is just as likely to be alive or dead, or, in other words, is that number of years for which it is an even contingency that a person will survive or die.

Comparison of Punjab (unselected) English (selected) and American (unselected) longevity.

The following expectations for English and Punjab lives are given with the most emphatic warning, that, whereas the English data are based on the experience of insured lives in 60 British life-insurance companies from 1863—1893, and are, therefore, *selected* lives, the Punjab data (taken from Table P. Life Table Punjab, Males in the Actuarial Report on Chapter V, Age, of the Census of India 1911, Volume I, page 187) are based on unselected lives, and that the latter are, therefore, subject to much greater rates of mortality. The figures are given in the margin.

EXPECTATIONS OF LIFE.

Age.	Median Expectation.	
	Punjab Life Table Males. Census 1911.	British Offices O.M (5) Table.
0	8·97	..
10	29·68	54·30
20	22·03	45·91
30	19·30	37·37
40	15·63	28·95
50	12·77*	20·90*

Probably a comparison of the Mortality Table for the North-Eastern States of America, constructed by Robert Henderson on the census returns of 1900 and 1910 of the New England States, the 3 Middle Atlantic States, New York, New Jersey and Pennsylvania,† which appears to deal with unselected‡ lives, may be more appropriately used for comparative purposes. The figures for the life table expectation are noted in the margin. Striking as the difference is between the expectations for the Punjab and for American lives, one must be cautious in assuming that the differences of the mean durations of life are real, in view, particularly, of the inaccuracy of the Punjab returns; though the whole of the differences could hardly be explained on this basis.

ACTUARIAL EXPECTATION OF LIFE IN THE PUNJAB AND IN AMERICA.

Age.	Expectation.	
	Punjab Life Table Males. Census 1911.	North Eastern States, Mortality Table (1908-1912).
0	21·23	50·41
10	31·38	51·97
20	26·72	43·36
30	21·60	35·49
40	17·55	27·96
50	14·15	20·76

117. In actuarial language a "stationary" population is one in which the numbers of persons entering and leaving each age-group at each moment, is constant. It corresponds, in fact, to a state of steady flow in hydrodynamics. In particular, in a "stationary" population the number of births from moment to moment must be invariable, or, at least, invariable within the limits of the discrete intervals chosen for the age-groups. This is of course a state of affairs never realised in population statistics, and until actuarial calculations have formed this stationary population our discussion of the comparative numbers of persons in the age-groups at different censuses will be of but slender value. We want, indeed, to trace the history of the persons born each year, and find out how many of them are alive in each subsequent year. For this purpose we should keep our eyes on the "natural" population, and follow it through all its vicissitudes of migration up to the time of death.

The "Stationary" Population.

In the table that follows no attempt has been made to allow for the effects of migration, and the figures quoted are simply the smoothed age-groups, altered

*The values given are those found by interpolation in the life-tables, using first differences only.

†Given on page 107 of "Mortality Laws and Statistics". R. Henderson, New York, John Wiley and Sons, London, Chapman and Hall, 1915. It should be noted that the death returns used are those of the years 1908—1912 inclusive.

‡The terms "selected" and "unselected" are used here in the sense that impaired lives are excluded or included as the case might be. The actuarial reports on the Provincial Census figures are based on the ages of selections of 100,000 or 200,000 persons out of each province, but this selection has no reference at all to the state of health of the persons selected. It is a pure compilation selection.

In the case of the present 1921 census, the compilation was made for 100,000 of each sex for each of the 3 main religions, Musalman, Hindu and Sikh, the selections being made, though not consistently, from the schedules of those districts in which the particular religious group predominated. Thus Hindus, of both sexes, were selected from the Eastern and Western Punjab. Musalmans, of both sexes, were taken from the Western and Eastern Punjab, and Sikhs, of both sexes, from the Central Punjab. Actually, the selection was even more strictly local than even this explanation shows, as, for example, Western Musalmans were all derived from the Attock district, while Eastern Hindus were all chosen from the Kangra district.

in each census in the proportion requisite to make the total number of persons equal to the adjusted total population as given in Imperial Table II, for the Punjab, as at present constituted, and Delhi. The process, though a rough one, makes a comparison possible between the numbers in the age-groups, in one census and another.

Smoothed figures by quinquennial age-groups of the total population of the Punjab and Delhi at the respective censuses. The population figures are taken from Table II.

Age-period.	1881.	1891.	1901.	1911.	1921.
Population, Punjab and Delhi	21,151,092	23,288,248	24,772,034	24,204,814	25,589,248
0—4	3,110,480	3,080,358	3,753,335	3,667,392	3,956,093
5—9	2,654,276	3,267,458	3,277,912	3,227,305	3,323,874
10—14	2,384,701	2,792,191	2,852,535	2,811,668	2,901,795
15—19	2,125,494	2,435,743	2,502,425	2,493,828	2,506,096
20—24	1,887,024	2,114,036	2,201,956	2,200,435	2,215,916
25—29	1,658,922	1,841,658	1,926,712	1,907,044	1,952,116
30—34	1,451,557	1,568,379	1,676,489	1,638,102	1,688,317
35—39	1,264,929	1,306,983	1,426,267	1,369,160	1,450,898
40—44	1,078,300	1,093,113	1,188,556	1,124,667	1,239,858
45—49	912,407	903,006	988,378	929,073	1,055,198
50—54	777,620	736,663	800,711	733,478	870,538
55—59	653,200	594,083	650,578	586,783	712,259
60 and over	1,202,716	739,039	1,503,830	1,430,283	1,719,973

NOTE.—Figures against 60 and over have not been smoothed.

From this table we may construct a rough "stationary" population and compare it with the Table P, for Males, prepared by the Actuary for the Census of 1911.

	1	2	3
	Population in thousands.	Adjusted to give same total as in Table P.	Actual figures in Table P.
Ages 0—4 at Census 1881	3,110	289	318
,, 10—14 ,, ,, 1891	2,792	260	239
,, 20—24 ,, ,, 1901	2,202	204	198
,, 30—34 ,, ,, 1911	1,638	152	155
,, 40—44 ,, ,, 1921	1,240	115	111
	10,982	1,020	1,021

The want of agreement between column 2 and column 3 shows how unwise it is to proceed to comparisons without having fully adjusted life-tables at our command. The difference seems large even admitting that the comparison is not *in pari materia*, as Mr. Acland's table was, of course, constructed without the help of the statistics of the 1921 Census, and of the birth and death records of the last decade.

The last point to be noted in this connection is that the "stationary" population for which the age-group frequencies are given in column 2 above, is that obtained by following the life-history of the persons between 0 and 4 at the Census of 1881, and observing how many of them are alive at each subsequent census. This, of course, gives us a death-rate applicable to persons aged 0 in 1881, aged 1 year in 1882, 2 years in 1883, and so on, which may be very different from the mortality found for ages 0, 1, 2, and so on, in 1921, or in the decade 1911 to 1921. It would be wrong, therefore, to apply these results, quite apart from their palpable defects, in determining the actual rates of mortality prevailing at the present moment. This of course, is the information, Life Insurance Companies want, and for this they must await the publication of the Actuary's report.

Persons over 40 years of age in various castes.

118. The marginal table shows the number of males and females over 40, in various Punjab Castes, and also a comparison between the number of persons over 40 in the various castes at the 1911 Census with that of 1921. On the face of it, it seems as if the criminal and menial (*kamin*) classes had an early mortality which left them with comparatively few people over 40, but this presumption would have to be tested by excluding the possibility of a recent more rapid increase in the births of the criminals and menials, and also by examining the likelihood of these classes understating their age more frequently than the higher and well-to-do classes.

Table showing the order of number of persons *per mille* over 40 years of age in principal castes of the Punjab, Subsidiary Table 4, Chapter V.

No.	Castes.	Class.	1921.		No. of persons over 40 *per mille*.	
			No. of males.	No. of females.	1921.	1911.
1	Kanet (H.) ..	Middle class hill tribe.	266	256	260	253
2	Brahman (H.) ..	Higher and well-to-do.	255	248	252	247
3	Khatri (H. S.) ..	" ..	248	245	247	235
4	Kashmiri (M.) ..	" ..	238	245	240	237
5	Sayad (M.) ..	" ..	244	234	239	231
6	Mughal (M.) ..	" ..	240	231	236	230
7	Dagi or Koli (H.) ..	Low class hill tribe	225	244	235	245
8	Rajput (H. M.) ..	Higher and well-to-do.	238	232	235	226
9	Harni (M.) ..	Criminal ..	253	216	235	205
10	Jat (H.M.S.) ..	Higher and well-to-do.	237	231	234	226
11	Quraishi (M.) ..	" ..	238	229	234	228
12	Pathan (M.) ..	" ..	233	225	229	226
13	Ahir (H.) ..	" ..	229	223	220	236
14	Biloch (M.) ..	" ..	230	219	225	225
15	Pakhiwara (M.) ..	Criminal ..	237	208	223	222
16	Khokhar (M.) ..	Higher and well-to-do.	232	211	222	219
17	Sansi (H.) ..	Criminal ..	233	208	221	218
18	Chamar (H.S.) ..	Labouring ..	219	208	214	205
19	Teli (M.) ..	" ..	212	209	211	209
20	Qasab (M.) ..	" ..	211	201	206	201
21	Mussali (M.) ..	Low class ..	215	186	201	196
22	Bawaria (H.) ..	Criminal ..	216	186	201	188
23	Chuhra (H.S.) ..	Low class ..	203	185	194	186
24	Mahtam (S.) ..	" ..	205	170	188	180
25	Dhanak (H.) ..	" ..	197	169	183	191
26	Meo (M.) ..	" ..	176	182	179	200

H.=Hindu, M.=Musalman, S.=Sikh.
Average for the Punjab in 1921 of persons over 40 years *per mille* .. 226.
Average for the Punjab in 1911 of persons over 40 years *per mille* .. 220.

Section II.—Vital Statistics.

Births and Deaths.

119. The numbers of births and deaths for males and females, the excess of births over deaths, and the ratio of female to male births and deaths, are given for each year since 1881 to 1920 inclusive, in Subsidiary Table XII to this Chapter. The question of the accuracy of the returns of births and deaths has been dealt with by Mr. Middleton in paragraph 25 of Chapter I, and by myself in paragraph 51 of Chapter II, and in Appendix I. My own belief is that there is a serious amount of omission in both birth and death returns, though in some districts, and, as it happens, in the whole of the Punjab taken together, the balance of reported births and deaths corresponds pretty closely with the change in population between the census of 1911 and that of 1921, after allowance for emigration and immigration. The reported figures of the vital statistics of the decade are given in the margin for the whole of the Punjab, which, of course, excludes the Delhi Province. The figures are quoted for the 2 quinquennia 1911—1915 and 1916—1920. From these figures, adopting as the approximate excess of immigrants over emigrants during the decade, 30,000 (15,000 males and 15,000 females), we make the following calculation of

Vital Statistics for the Punjab.

	Males.	Females.	Total.
		Births.	
1911—15	2,269,989	2,070,721	4,340,710
1916—20	2,175,653	1,956,743	4,132,396
Total decade	4,445,642	4,027,464	8,473,106
		Deaths.	
1911—15	1,586,396	1,482,307	3,068,703
1916—20	2,075,811	1,916,671	3,992,482
Total decade	3,662,207	3,393,978	7,061,185

the 1921 population from that of 1911 :—

	Males.	Females.	Total.
Population 1911	13,093,640	10,697,727	23,791,367
Add births 1911—1920	4,445,642	4,027,464	8,473,106
	17,539,282	14,725,191	32,264,473
Subtract deaths 1911—1920	3,662,207	3,398,978	7,061,185
	13,877,075	11,326,213	25,203,288
Add excess immigration over emigration	15,000	15,000	30,000
Calculated population 1921	13,892,075	11,341,213	25,233,288
Census population 1921	13,732,048	11,369,012	25,101,060
Difference, excess calculated over census population ..	+160,027	— 27,799	+132,228

The differences between the calculated populations male and female, and those given by the census figures, are indicative (so far as we accept the accuracy of the census figures, and of the calculation of emigration and immigration) that while male births are less frequently unreported than male deaths, for females the reverse is the case. The tendency to omit the births of females, is even greater than the tendency to omit reporting their deaths, though, as has been observed, there is reason to suppose that in both cases the number of omissions is considerable.

Ratio of female to male births.

120. The ratio of female to male births which, according to the figures, has risen from 0·87 in the decade 1881—1891 to round about 0·90 since 1891, has been given only to two places of decimals in Subsidiary Table XII to this Chapter, and even to that approximation the figures are probably not to be relied on. At any rate, those who wish to make the deduction that there has been a genuine increase in the ratio of female to male births since 1881, do so at their own risk. The apparent rise since 1891 may be explained by the slight increase in the efficiency of registration, which continued until the burden of the war on District Officers, and the turning of their attention to the more immediately pressing problems of recruitment and of anti-revolutionary measures, caused a slight relaxation in supervision of the chowkidar's (village watchman's) returns of births and deaths.*

The ratio of females to male deaths exhibits considerable irregularity, the highest reported ratio being 1·05 in 1904, and the lowest 0·85 in 1920. The comparatively high ratio of 0·97 in 1918, has been attributed to the effects of the influenza epidemic, to which a higher proportion of females than males succumbed. The other variations must be referred to their causes by medical experts.

Deaths in the Punjab 1867-1921.

121. According to the scheme elaborated with Colonel Forster, I. M. S., Director of Public Health, Punjab, the deaths from the following categories of diseases have been examined from 1867 onwards, for the elucidation of the seasonal variation. The categories were :—

(1) deaths from all causes.
(2) „ „ cholera.
(3) „ „ small-pox.
(4) „ „ bowel complaints.
(5) „ „ plague.
(6) „ „ fevers.
(7) „ „ all causes not specified under groups (2)—(6) inclusive.

The 55 years have been separated into two periods, *viz.*, from 1867—1896 (30 years) and from 1897—1921 (25 years), the latter period corresponding to the intensive colony-development policy of the Punjab Government, which has been the big factor in Punjab economic history in the past fifty years. A further advantage of this separation is that it will enable successive groups of 30 years' statistics to be compared, as the figures up to and including 1926, 1956, 1986 and so on, become available. The method adopted for preparing the statistics is known as Newsholme's. In this method the daily death-rate is determined by dividing the total number of deaths from the particular disease by the number of days in

*Up till quite recently the chowkidar's remuneration was round about Rs. 3—Rs. 4 a month, equivalent to about £ 3 a year. For this sum he had to have every birth and death in his village entered up by the circle patwari, and then tramp with his registers once a week to the nearest police station, it might be 10 or 15 miles away. No wonder he sometimes neglected his duties. In such cases a fine of 4 annas (four pence) would sometimes produce the utmost consternation.

the year, while the number of deaths in each month is divided by the number of days in the month. The ratio of the second quotient to the former, expressed as a percentage, gives a number indicative of the relative intensity of the disease in the month in question. By averaging these percentages for a good many years, we determine to what extent there is a seasonal recurrence of intensity.

By grouping the years according as the mortality from the disease considered was low, normal, or high, any differences in the seasonal recurrences for mild, moderate or severe epidemics can be isolated. All relevant data are collected in Appendix 4 to this volume. I leave to more competent persons the task of interpreting the results, in terms of fluctuations in the climate, food-supply, dates of fairs*, natural immunity, and medical treatment.

The reader is referred to Appendix 4 for further notes on the subject.

Deaths in Punjab Jails.

122. It has been observed, from time to time by, various writers on the subject that a fair comparison of the death-rate in jails, and in the free population, is possible only if allowance is made for the fact that persons undergoing imprisonment consist mainly of persons in the healthy middle ages of life, and of very few young children and aged persons.

Thus, in Punjab jails the death-resistant group of males, aged 16—40, comprises no less than 80 per cent. of the jail population, whereas in the population at large this age group includes only about 40 per cent. of persons alive. In this way jails escape the major portion of the high infantile mortality and of the deaths among the aged. To institute a comparison of the healthiness of jails and of the free-living persons outside, it is necessary, therefore, to correct the crude jail death-rates for the effects of the differential size of the age-groups.

There are two standard ways of doing this, named respectively, the "direct" and "indirect" methods of correction. In the "direct" method the death-rates for each age-group in jails are applied to the numbers of persons in the corresponding age-groups of the free-population, and a total death-rate calculated. In the "indirect" method the death-rates for each age-group in the free population are applied to the number of persons in the corresponding age-group of the jail population, and an "expected" total death-rate calculated; the ratio of the actual total death-rate in jails, to the "expected" death-rate forms a factor, which multiplied by the actual jail death-rate, gives the "indirectly" corrected jail death-rate. Colonel Ward, I. M. S., Inspector-General of Prisons, having very kindly supplied me with the figures of—

(1) the ages of admission of convicts into Punjab jails,

(2) the mortality rates based on the average daily population,

for the eleven years 1911—1921 inclusive, the corrected jail death-rate has been found by the "indirect" method referred to above.†

The results for males only are given in the table below :—

Mortality per mille in Punjab Jails.

Year.	"Expected" death-rate in jails if it were the same for each age-group as in the general population.	Actual death-rate in jails, as given in I. G. of Prisons Report.	Ratio of column 3 to column 2.	General death-rate *per mille* from Sanitary Report.	Corrected jail death-rate : column 4 into column 5.
1	2	3	4	5	6
1911	19·38	29·20	1·51	34·05	51·42
1912	11·44	20·06	1·75	26·63	46·60
1913	12·13	17·72	1·46	30·19	44·08
1914	12·94	26·99	2·09	31·96	66·80
1915	20·97	26·81	1·28	36·33	46·50
1916	12·42	21·71	1·75	30·70	53·73
1917	15·08	28·02	1·86	37·91	70·51
1918	64·53	58·51	0·91	80·96	73·67
1919	14·34	23·25	1·62	28·34	45·91
1920	14·64	16·65	1·14	28·55	32·55
1921	13·45	17·55	1·30	30·13	39·17

*Colonel Forster, I.M.S., to whose help, both mental and material, I am greatly indebted, points out that changes in the dates of fairs have marked effects in determining changes in the dates of onset of such a disease as cholera.

†Had time permitted I would have calculated the corrected jail death-rate by the "direct" method as well. For this purpose, however, the laborious abstraction of the deaths by age-groups is a necessary preliminary, and after looking at the original documents, which gave the mortalities for each Punjab jail separately, I concluded that the task, important though it is, could not be undertaken at present.

As it stands the table shows that, with the single exception of 1918, when the jails escaped much of the mortality from the severe influenza epidemic, the healthiness (as shown by the death returns) in Punjab jails from 1911 to 1921 was below that of the free population. Now, there are a great many points to be noticed before jumping to conclusions unfavourable to prison administration.

Firstly, the ages adopted in the calculation above are those of convicts on admission. Actually we want the ages of convicts during the term of sentence. A calculation for 1914 given in the margin shows that we may adopt 1 year as an approximate figure for the duration of sentences in Punjab jails, and that therefore we should add, roughly, half a year to the ages of prisoners on admission to get the ages of those undergoing imprisonment. This will very slightly alter the corrected death-rates in favour of the jails.

Average duration of sentence in Punjab Jails, 1914.

Period of sentence.	Adopted means in years.	Convicts in thousands.	Product.
1 month and under ..	0·06	31	1·86
6 months to over 1 month ..	0·30	68	20·4
1 year to over 6 months ..	0·80	46	36·8
5 years to over 1 year ..	2·0	37	74·0
10 years to over 5 years ..	7·0	5	35·0
Over 10 years ..	12·0	0·4	4·8
Transportation for life and term.	20·0	1·8	36·0
		189·2	208·86

Average duration, excluding transportation, 0·92 years.
Average duration, including transportation, 1·10 years.

Secondly, there is in jails a certain number of deaths of persons, who have been concerned in riots and affrays, and may have received such severe injuries, that they have died shortly after admission.

Thirdly, a large number of convicts are persons who earn a precarious livelihood outside prison, and belong to the relatively poorly-clad and ill-fed portion of the population. In other words the jail population is not a pure random sample from the general population.

Lastly, there is the psychological effect of captivity* which, even in the healthiest surroundings from the standpoint of sanitation and medical attention, has a depressing effect on the prisoner's physical "tone" and lessens his resistance to disease.

* This is the factor to which Col. Forster, I.M.S., Director of Public Health, attaches great weight.

I. Age distribution of 100,000 of each sex by annual periods. II. Based on Imperial Table VII. Age distribution of 10,000 of each sex in the Province and each Natural Division. III. Age distribution of 10,000 of each sex in each main religion. IV. Based on Imperial Table XIV. Age distribution of 1,000 of each sex in certain castes. V. Proportion of children under 10 and of persons over 60 to those aged 15—40 and also of married females aged 15—40 per 100 females. V-A. Proportion of children under 10 and of persons over 60 to those aged 15—40 in certain religions, and also of married females aged 15—40 per 100 females. VI. Variation in population at certain age-periods. VII. Reported birth-rate by sex and Natural Divisions (for British Territory only). VIII. Reported death-rate by sex and Natural Divisions (for British Territory only). IX. Reported death-rate by sex and age in decade and in selected years *per mille* living at same age according to the Census of 1911 (for Punjab and Delhi, British Territory only). X. Reported deaths from certain diseases *per mille* of each sex. XI. The ratio of the number of males, females and persons per 100,000 at the Census of 1911 to that of the Census of 1921 for each year of age, as recorded in the Census Schedules. XII. Statement showing the Births and Deaths since 1881, Punjab (British Territory) including Delhi.

SUBSIDIARY TABLE I.

Age distribution of 100,000 of each sex by annual periods.

Age.	Males.				Females.			
	Hindu.	Sikh.	Musalman.	Total.	Hindu.	Sikh.	Musalman.	Total.
1	2	3	4	5	6	7	8	9
TOTAL ..	100,000	100,000	100,000	300,000	100,000	100,000	100,000	300,000
Under 1 ..	3,800	2,962	3,986	10,748	4,148	4,098	4,104	12,350
1	1,448	2,005	1,558	5,011	1,626	1,759	1,906	5,291
2	2,261	2,024	2,344	6,629	2,627	2,343	2,755	7,725
3	2,551	2,197	2,803	7,551	3,030	2,620	2,995	8,645
4	2,673	2,345	3,239	8,257	2,999	2,711	3,194	8,904
5	3,269	3,190	3,221	9,680	3,297	3,307	3,449	10,053
6	2,898	2,378	3,486	8,762	3,134	2,798	3,838	9,770
7	2,735	2,935	2,804	8,474	2,937	2,831	3,117	8,885
8	3,113	2,880	4,040	10,033	3,348	2,696	3,786	9,830
9	2,293	2,411	2,223	6,927	2,337	2,421	2,191	6,949
10	3,174	2,922	3,712	9,808	3,187	3,140	3,376	9,703
11	1,664	2,417	1,541	5,622	1,635	1,857	1,447	4,939
12	3,650	3,386	4,102	11,138	3,052	2,871	2,739	8,662
13	1,641	2,047	1,355	5,043	1,469	1,695	1,332	4,496
14	2,009	1,965	2,204	6,178	1,840	1,842	1,869	5,551
15	2,241	2,604	2,018	6,863	1,894	2,114	1,950	5,958
16	2,025	2,138	1,908	6,071	1,946	1,622	1,913	5,481
17	1,013	1,311	1,010	3,334	892	949	779	2,620
18	2,448	2,726	2,256	7,430	2,374	2,120	2,518	7,012
19	794	996	875	2,665	613	721	728	2,062
20	3,186	3,470	2,954	9,610	3,910	3,289	4,344	11,543
21	595	744	508	1,847	392	683	413	1,488
22	1,932	2,440	1,850	6,222	1,978	1,828	2,016	5,822
23	684	912	633	2,229	526	531	454	1,511
24	913	1,090	1,257	3,260	932	810	1,071	2,813
25	4,260	3,974	3,919	12,153	4,590	3,719	4,842	13,151
26	1,042	1,146	988	3,176	1,004	1,111	1,121	3,236
27	731	906	778	2,415	600	764	522	1,886
28	1,295	1,195	1,229	3,719	1,467	1,590	1,356	4,413
29	333	363	565	1,261	338	316	351	1,005
30	4,436	4,295	4,177	12,908	5,192	4,938	5,328	15,458
31	212	190	314	716	143	158	225	526
32	1,751	1,758	1,664	5,173	1,528	1,395	1,606	4,529
33	349	426	377	1,152	280	356	177	813
34	364	359	556	1,279	400	479	585	1,464
35	3,894	3,990	3,481	11,365	3,696	3,973	3,780	11,449
36	703	541	583	1,827	613	450	562	1,625
37	231	245	227	703	184	202	195	581
38	471	533	395	1,399	583	533	396	1,512
39	227	190	640	1,057	189	231	154	574
40	4,782	4,461	4,102	13,345	5,173	5,418	4,937	15,528
41	132	114	161	407	118	110	124	352
42	658	557	420	1,635	550	570	339	1,465
43	172	149	80	401	84	154	55	293
44	141	148	436	725	132	208	97	437
45	3,088	2,983	2,588	8,659	2,954	3,350	2,693	8,997
46	252	190	171	613	179	165	132	476
47	164	194	137	495	102	148	51	301
48	411	350	323	1,084	460	429	370	1,259
49	185	135	502	822	161	164	91	416
50	3,991	3,530	3,695	11,216	3,606	4,359	3,940	11,905
51	123	95	123	341	82	99	89	270
52	431	437	285	1,153	323	389	211	923
53	83	145	68	296	43	81	34	158
54	120	124	294	538	103	311	60	474
55	1,742	1,486	1,785	5,013	1,398	1,636	1,333	4,367

SUBSIDIARY TABLE I—*concluded.*

Age distribution of 100,000 of each sex by annual periods.

Age.	Males.				Females.			
	Hindu.	Sikh.	Musalman.	Total.	Hinud.	Sikh.	Musalman.	Total.
1	2	3	4	5	6	7	8	9
56	202	138	91	431	124	99	61	284
57	103	118	78	299	44	86	44	174
58	193	204	100	497	132	213	95	440
59	123	357	430	910	57	126	60	243
60	3,265	2,790	2,706	8,761	2,882	3,461	2,700	9,043
61	123	100	67	290	74	62	83	219
62	218	281	100	599	166	228	83	477
63	83	99	45	227	32	55	23	110
64	68	94	189	351	43	172	31	246
65	1,004	1,049	724	2,777	1,277	960	610	2,847
66	56	81	54	191	32	51	25	108
67	31	50	31	112	21	33	13	67
68	78	82	49	209	58	69	32	159
69	58	55	208	321	83	61	17	161
70	1,101	1,331	953	3,385	1,123	1,531	1,029	3,683
71	29	13	23	65	18	10	18	46
72	108	108	49	265	83	81	34	198
73	34	36	11	81	6	21	2	29
74	18	29	53	100	21	22	12	55
75	319	367	202	888	296	348	165	809
76	19	25	18	62	12	11	15	38
77	27	16	15	58	7	6	6	19
78	32	48	27	107	23	25	11	59
79	16	20	4	40	32	17	7	56
80	543	473	500	1,516	577	448	461	1,486
81	20	5	14	39	11	9	8	28
82	28	20	9	57	18	18	7	43
83	8	5	7	20	1	2	1	4
84	11	10	5	26	7	8	1	16
85	62	95	76	233	75	86	53	214
86	6	6	2	14	..	4	42	46
87	3	4	6	13	3	1	..	4
88	3	2	5	10	6	8	9	23
89	1	1	3	5	16	1	7	24
90	119	110	104	333	118	128	117	363
91	11	5	2	18	5	3	2	10
92	5	3	3	11	12	7	3	22
93	11	..	5	16	5	..	..	5
94	1	1	8	10	7	2	..	9
95	23	34	30	87	24	27	21	72
96	3	4	..	7	15	..	15	30
97	3	3	2	8	5	..	4	9
98	2	2	1	5	3	8	6	17
99	6	4	1	11	3	2	3	8
100	31	15	24	70	29	22	18	69
101	1	1	..	2	2	1	1	4
102	..	1	2	3	1	1	..	2
103	..	..	2	2	..	..	..	..
104	..	..	..	..	1	..	..	1
105	2	..	1	3	3	..	1	4
106	3	..	..	3	..	..	..	..
110	2	..	5	7	2	1	1	4
112	..	..	1	1	..	..	..	..
114	..	..	..	..	..	..	1	1
115	..	..	..	..	1	3	..	4
120	..	..	3	3	..	..	1	1
121	..	..	1	1	..	..	..	..
125	..	..	1	1	..	..	..	..
135	..	1	..	1	..	..	1	1

NOTE.—This Table was prepared by sorting actual samples, the numbers actually sorted were—
Males.—Hindu 51,403 from the Western and 66,008 from the Eastern Punjab.
Sikh 01,120 from the Central Punjab.
Musalman 54,303 from the Western and 60,566 from the Eastern Punjab.
Females.—Hindu 50,605 from the Western and 55,856 from the Eastern Punjab.
Sikh 101,554 from the Central Punjab.
Musalman 52,9 2 from the Western and 56,302 from the Eastern Punjab.
The figures have not been adjusted in any way beyond proportional reduction to a total of 100,000 of each sex.

SUBSIDIARY TABLE II.

Based on Imperial Table VII.

Age distribution of 10,000 of each sex in the Province and each Natural Division.

Age	Punjab. 1921. Males.	Punjab. 1921. Females.	Delhi. 1921. Males.	Delhi. 1921. Females.	Punjab and Delhi. 1921. Males.	Punjab and Delhi. 1921. Females.	Punjab and Delhi. 1911. Males.	Punjab and Delhi. 1911. Females.	Punjab and Delhi. 1901. Males.	Punjab and Delhi. 1901. Females.	Punjab and Delhi. 1891. Males.	Punjab and Delhi. 1891. Females.	Punjab and Delhi. 1881. Males.	Punjab and Delhi. 1881. Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Under 1	369	431	310	411	368	430	381	444	301	327	409	466	318	357
1—2	142	167	113	157	142	167	146	172	160	177	288	313	179	201
2—3	231	269	176	247	230	268	229	264	255	272	292	327	205	231
3—4	258	306	225	317	257	307	259	302	256	284	291	309	247	280
4—5	272	305	223	288	271	305	262	290	273	290	323	326	267	287
Total under 5	1,272	1,478	1,047	1,420	1,268	1,477	1,277	1,472	1,245	1,350	1,603	1,741	1,216	1,360
5—9 (inclusive) ..	1,457	1,538	1,117	1,377	1,451	1,535	1,333	1,388	1,354	1,365	1,364	1,355	1,354	1,353
10—14 (inclusive) ..	1,217	1,104	1,013	956	1,213	1,102	1,189	1,029	1,231	1,087	1,054	916	1,216	1,069
15—19 (inclusive) ..	851	785	976	927	853	788	915	817	913	842	1,045	1,078	902	861
20—24 (inclusive) ..	770	796	1,130	1,080	777	801	850	889	794	852	927	948	856	915
25—29 (inclusive) ..	822	813	1,048	915	826	815	874	881	837	874	942	1,000	852	882
30—34 (inclusive) ..	753	774	938	837	756	775	790	828	820	861	648	602	833	859
35—39 (inclusive) ..	550	511	604	506	551	511	536	514	551	542	659	708	514	495
40—44 (inclusive) ..	566	598	678	612	568	598	601	652	642	673	356	326	648	693
45—49 (inclusive) ..	382	353	369	315	382	352	377	347	355	337	504	503	354	323
50—54 (inclusive) ..	464	456	484	465	465	456	475	460	468	462	201	163	496	473
55—59 (inclusive) ..	204	173	157	147	203	173	182	152	184	159	372	364	174	146
60—64 (inclusive) ..	340	311	258	262	338	310	236	297						
65—69 (inclusive) ..	106	84	59	53	105	83	195	71	606	596	325	296	585	575
70 and over	246	226	122	128	244	224	170	200						
Mean age	25·4	24·5	25·8	24·1	25·4	24·5	25·2	24·7	25·0	24·9	23·0	22·6	25·0	24·7
INDO-GANGETIC PLAIN WEST.														
0—4 (inclusive) ..	1,272	1,511	1,047	1,420	1,262	1,508	1,243	1,451	1,185	1,274	1,594	1,720	1,160	1,281
5—9 (inclusive) ..	1,416	1,527	1,117	1,377	1,403	1,521	1,255	1,304	1,332	1,342	1,321	1,313	1,286	1,286
10—14 (inclusive ..	1,215	1,120	1,013	956	1,207	1,114	1,199	1,028	1,246	1,117	1,080	939	1,236	1,092
15—19 (inclusive) ..	897	791	976	927	901	795	1,022	878	978	876	1,092	1,100	962	893
20—39 (inclusive) ..	2,942	2,857	3,720	3,339	2,975	2,876	3,107	3,150	3,005	3,123	3,204	3,302	3,111	3,207
40—59 (inclusive) ..	1,602	1,592	1,688	1,539	1,605	1,590	1,627	1,648	1,683	1,688	1,419	1,365	1,697	1,691
60 and over ..	656	602	439	443	647	596	547	541	571	580	290	261	548	550
HIMALAYAN.														
0—4 (inclusive) ..	1,056	1,209	..	..	1,056	1,209	1,089	1,225	1,054	1,195	1,375	1,589	1,053	1,209
5—9 (inclusive) ..	1,266	1,345	..	..	1,266	1,345	1,191	1,288	1,177	1,293	1,239	1,282	1,266	1,343
10—14 (inclusive) ..	1,122	1,024	..	..	1,122	1,024	1,098	1,002	1,212	1,089	1,070	927	1,188	1,022
15—19 (inclusive) ..	866	911	..	..	866	911	904	927	914	912	1,013	1,113	910	928
20—39 (inclusive) ..	3,041	3,137	..	..	3,041	3,137	3,170	3,246	3,186	3,258	3,388	3,406	3,233	3,304
40—59 (inclusive) ..	1,846	1,663	..	..	1,846	1,663	1,843	1,659	1,805	1,613	1,532	1,338	1,707	1,568
60 and over ..	803	711	..	..	803	711	705	653	652	640	383	345	643	626
SUB-HIMALAYAN.														
0—4 (inclusive) ..	1,261	1,426	..	..	1,261	1,426	1,274	1,460	1,286	1,353	1,562	1,666	1,217	1,350
5—9 (inclusive) ..	1,455	1,502	..	..	1,455	1,502	1,352	1,393	1,348	1,318	1,416	1,395	1,406	1,396
10—14 (inclusive) ..	1,226	1,103	..	..	1,226	1,103	1,208	1,040	1,234	1,054	1,057	917	1,265	1,110
15—19 (inclusive) ..	812	770	..	..	812	770	844	763	881	818	1,026	1,065	887	865
20—39 (inclusive) ..	2,794	2,856	..	..	2,794	2,856	2,979	3,078	2,955	3,138	3,155	3,247	3,022	3,105
40—59 (inclusive) ..	1,662	1,648	..	..	1,662	1,648	1,661	1,645	1,635	1,670	1,427	1,377	1,613	1,597
60 and over ..	790	695	..	..	790	695	682	621	661	649	357	333	590	577
NORTH-WEST DRY AREA.														
0—4 (inclusive) ..	1,343	1,549	..	..	1,343	1,549	1,403	1,604	1,408	1,589	1,812	2,017	1,482	1,690
5—9 (inclusive) ..	1,591	1,651	..	..	1,591	1,651	1,509	1,576	1,477	1,509	1,467	1,454	1,523	1,497
10—14 (inclusive) ..	1,238	1,099	..	..	1,238	1,099	1,175	1,029	1,194	1,056	959	834	1,070	936
15—19 (inclusive) ..	795	753	..	..	795	753	779	722	793	764	944	1,015	725	715
20—39 (inclusive) ..	2,857	2,928	..	..	2,857	2,928	2,975	3,044	2,989	3,081	3,023	3,070	2,844	2,975
40—59 (inclusive) ..	1,538	1,466	..	..	1,538	1,466	1,563	1,487	1,531	1,450	1,443	1,295	1,690	1,562
60 and over ..	638	554	..	..	638	554	596	538	608	551	352	315	666	625

Notes.—1. Figures of age-periods 60—64, 65—69 and 70 and over are not available for 1881, 1891 and 1901, and have been collectively worked out for 60 and over.

2. Figures of 1901 do not include the population of Biloch Trans-Frontier.

SUBSIDIARY TABLE III.

Age distribution of 10,000 of each sex in each main Religion.

Age.	Punjab. 1921.		Delhi. 1921.		Punjab and Delhi. 1921.		1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ALL RELIGIONS														
0—4 (inclusive) ..	1,272	1,478	1,047	1,420	1,268	1,477	1,277	1,472	1,245	1,350	1,603	1,740	1,216	1,356
5—9 (inclusive) ..	1,457	1,538	1,117	1,377	1,451	1,535	1,333	1,388	1,355	1,365	1,364	1,355	1,354	1,353
10—14 (inclusive) ..	1,217	1,104	1,013	956	1,213	1,102	1,189	1,029	1,231	1,087	1,054	910	1,210	1,069
15—19 (inclusive) ..	851	785	976	927	853	788	915	817	913	842	1,045	1,078	902	861
20—39 (inclusive) ..	2,895	2,894	3,720	3,338	2,910	2,902	3,050	3,115	3,001	3,128	3,176	3,259	3,055	3,151
40—59 (inclusive) ..	1,616	1,580	1,688	1,539	1,618	1,579	1,635	1,611	1,649	1,632	1,433	1,350	1,673	1,635
60 and over ..	692	621	439	443	687	617	601	568	606	596	325	290	584	575
Mean age ..	25·4	24·5	25·8	24·1	25 4	24·5	25·2	24·7	25·0	24·9	23·0	22·6	25·4	24·7
HINDU														
0—4 (inclusive) ..	1,211	1,436	1,053	1,409	1,205	1,435	1,189	1,386	1,156	1,267	1,546	1,700	1,122	1,260
5—9 (inclusive) ..	1,384	1,489	1,112	1,346	1,374	1,485	1,235	1,302	1,304	1,349	1,294	1,303	1,291	1,312
10—14 (inclusive) ..	1,187	1,096	1,015	936	1,180	1,090	1,166	1,028	1,234	1,102	1,082	938	1,217	1,064
15—19 (inclusive) ..	886	817	998	960	890	822	999	886	948	862	1,076	1,092	947	887
20—39 (inclusive) ..	3.005	2,952	3,724	3,356	3,032	2,965	3,158	3,189	3,079	3,158	3,274	3,327	3,191	3,247
40—59 (inclusive) ..	1,675	1,605	1,667	1,541	1,675	1,603	1,695	1,655	1,717	1,681	1,435	1,365	1,697	1,667
60 and over ..	652	605	431	452	644	600	558	554	562	581	293	272	535	563
Mean age ..	25·7	24·7	25·7	24·2	25·6	24·6	25·5	25·0	25·3	25·1	23·1	22·7	25·2	25·0
MUSALMAN—														
0—4 (inclusive) ..	1,328	1,518	1,054	1,453	1,324	1,517	1,347	1,541	1,342	1,451	1,673	1,806	1,313	1,453
5—9 (inclusive) ..	1,533	1,686	1,164	1,454	1,528	1,585	1,422	1,467	1,421	1,407	1,443	1,418	1,440	1,417
10—14 (inclusive) ..	1,237	1,106	1,044	1,013	1,235	1,105	1,209	1,040	1,233	1,083	1,026	894	1,229	1,080
15—19 (inclusive) ..	816	769	943	841	817	770	842	776	869	821	1,024	1,075	854	840
20—39 (inclusive) ..	2,823	2,878	3,542	3,247	2,832	2,882	2,970	3,059	2,940	3,093	3,093	3,178	2,918	3,051
40—59 (inclusive) ..	1,563	1,535	1,774	1,556	1,566	1,536	1,588	1,553	1,572	1,553	1,397	1,321	1,627	1,582
60 and over ..	700	608	479	436	698	605	622	564	623	592	344	308	619	577
Mean age ..	25·0	24·1	26·0	23·9	25·0	24·2	24·9	24·2	24·6	24·4	22·7	22·2	24·7	24·3
CHRISTIAN—														
0—4 (inclusive) ..	1,394	1,691	937	1,353	1,375	1,679	1,348	1,777	949	1,557	891	1,788	678	1,679
5—9 (inclusive) ..	1,520	1,671	894	1,357	1,495	1,660	1,293	1,572	956	1,472	786	1,506	559	1,477
10—14 (inclusive) ..	1,230	1,160	720	935	1,208	1,152	1,001	1,061	810	1110	530	977	414	1,120
15—19 (inclusive) ..	883	811	851	1,027	882	818	744	792	608	879	775	1,052	398	956
20—39 (inclusive) ..	3,015	2,783	5,095	3,728	3,100	2,817	3,955	3,045	5,379	3,367	6,137	3,503	7,695	3,671
40—59 (inclusive) ..	1,348	1,369	1,252	1,313	1,345	1,367	1,225	1,332	1,011	1,238	767	984	771	908
60 and over ..	610	515	251	287	595	507	434	421	287	377	114	190	85	189
Mean age ..	23·8	22·7	24·9	23·2	23·9	22·7	23·7	22·9	24·4	22·5	23·3	20·7	25·4	20·6
SIKH—														
0—4 (inclusive) ..	1,209	1,412	631	1,517	1,209	1,412	1,247	1,417	1,157	1,151	1,545	1,542	1,184	1,291
5—9 (inclusive) ..	1,358	1,458	651	1,354	1,358	1,458	1,261	1,300	1,249	1,190	1,317	1,261	1,225	1,197
10—14 (inclusive) ..	1,219	1,115	672	877	1,218	1,115	1,189	975	1,219	1,040	1,082	942	1,163	1,027
15—19 (inclusive)	891	760	946	990	891	760	977	781	998	864	1,006	1,017	939	847
20—39 (inclusive) ..	2,850	2,806	5,039	3,922	2,853	2,806	2,992	3,136	2,879	3,189	3,021	3,369	3,016	3,223
40—59 (inclusive) ..	1,691	1,718	1,317	1,078	1,690	1,718	1,679	1,746	1,767	1,863	1,633	1,520	1,809	1,788
60 and over ..	782	731	244	263	781	731	655	645	731	703	396	349	664	627
Mean age ..	26·2	25·6	26·6	22·0	26·2	25·6	25·7	25·7	26·1	26·7	23·9	23·8	26·0	25·8

SUBSIDIARY TABLE IV.

BASED ON IMPERIAL TABLE XIV.

Age distribution of 1,000 of each sex in certain castes.

PUNJAB.

SUBSIDIARY TABLE IV-A.

Proportion of children under 12 and of persons over 40 to those aged 15—40 in certain castes, also of married females aged 15—40 per 100 females.

Caste.	Males.—Number *per mille* aged.					Females.—Number *per mille* aged.					Proportion of children both sexes per 100.		Proportion of persons over 40 per 100, aged 15—40.		Number of married females aged 15—40 per 100 females of all ages.
	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	Persons aged 15—40.	Married females aged 15—40.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Aggarwal (Hindu) ..	122	181	72	407	218	139	194	65	384	218	80	228	54	57	31
2. Ahir (Hindu) ..	125	187	75	384	229	156	198	59	364	223	88	228	60	61	33
3. Arain (Musalman) ..	137	195	75	367	226	156	202	74	360	208	95	242	62	58	31
4. Arora (Hindu) ..	119	187	78	395	221	139	194	66	385	216	82	218	56	56	32
5. ,, (Sikh) ..	140	202	80	351	227	150	200	69	369	212	96	242	65	58	31
6. Awan (Musalman) ..	133	197	92	349	229	141	188	69	371	231	92	223	66	62	31
7. Barwala (Musalman)	138	206	73	364	219	168	208	71	347	206	101	255	60	59	31
8. Bawaria (Hindu) ..	163	230	68	323	216	180	228	54	352	186	119	270	66	53	32
9. Bharai (Musalman)	134	198	75	356	237	146	209	62	356	227	96	241	67	64	31
10. Biloch (Musalman)..	136	211	74	349	230	152	203	62	364	219	98	241	66	60	32
11. Brahman (Hindu) ..	107	166	71	401	255	128	183	61	380	248	74	212	64	65	30
12. Chamar (Hindu) ..	136	201	78	378	207	157	209	66	367	201	94	228	55	55	34
13. ,, (Sikh) ..	134	200	73	362	231	152	216	62	355	215	97	235	64	60	33
14. Chhimba (Hindu)	120	174	72	362	272	140	198	66	367	229	86	219	75	62	33
15. ,, (Sikh) ..	122	185	72	354	267	146	199	67	345	243	92	232	75	70	31
16. ,, (Musalman)	142	205	72	361	220	165	210	63	353	209	101	251	61	59	31
17. Churah (Hindu) ..	143	205	84	365	203	168	214	70	362	186	100	246	56	51	32
18. ,, (Sikh) ..	139	213	73	379	196	164	226	70	362	178	99	255	52	49	32
19. Dagi or Koli (Hindu)	106	168	70	431	225	116	165	63	412	244	66	157	52	59	36
20. Dhanak (Hindu) ..	150	220	73	360	197	170	219	71	371	169	104	234	55	46	34
21. Dhobi (Musalman)	142	184	75	361	238	151	189	74	366	220	92	228	66	60	31
22. Dogar (Musalman)	128	193	84	378	217	155	204	76	355	210	92	256	57	59	29
23. Faqir (Musalman) ..	127	198	75	360	240	159	209	65	352	215	97	246	66	61	31
24. Ghirth (Hindu) ..	129	192	75	361	243	155	181	67	395	202	87	200	67	51	34
25. Gujjar (Hindu) ..	116	186	71	391	236	135	179	64	383	239	79	207	61	62	34
26. ,, (Musalman)	126	186	81	366	241	141	197	72	366	224	89	221	66	61	32
27. Harni (Musalman) ..	139	227	66	314	254	196	213	57	318	216	122	313	81	68	29
28. Jat (Hindu) ..	128	188	76	379	229	150	197	69	363	221	89	226	61	61	33
29. ,, (Sikh) ..	114	176	74	382	254	135	184	66	356	259	81	228	66	73	32
30. ,, (Musalman ..	134	197	82	360	227	153	195	72	367	213	93	245	63	58	31
31. Jhiwar (Hindu) ..	129	186	71	381	233	149	203	65	365	218	89	230	61	60	32
32. ,, (Sikh) ..	134	196	71	370	229	153	209	57	357	224	95	232	62	63	32
33. ,, (Musalman)	143	195	79	363	220	161	208	66	359	206	98	244	61	57	32
34. Julaha (Hindu) ..	113	163	64	411	249	133	189	64	402	212	73	181	61	53	36
35. ,, (Musalman) ..	135	196	73	365	231	154	204	67	365	210	94	241	63	58	31
36. Kamboh (Sikh) ..	145	177	73	381	224	159	209	73	354	205	93	241	59	58	31
37. ,, (Musalman)	151	200	75	346	228	164	203	80	369	184	101	234	66	50	33
38. Kanet (Hindu) ..	95	162	73	404	260	105	165	62	414	254	64	152	66	61	36
39. Kashmiri (Musalman	128	194	77	366	235	138	193	68	358	243	90	234	64	68	30
40. Khatri (Hindu) ..	112	161	76	416	235	144	173	69	370	244	74	217	56	66	30
41. ,, (Sikh) ..	134	184	80	341	261	141	184	72	357	246	92	224	77	69	30
42. Khoja (Musalman)	147	207	74	353	219	161	212	69	365	193	101	238	63	53	31
43. Khokhar (Musalman)	132	199	83	354	232	159	198	65	366	212	95	254	66	58	30
44. Kumhar (Hindu) ..	129	188	72	384	227	154	205	65	366	210	90	222	59	58	33
45. ,, (Musalman)	147	194	81	355	223	158	208	65	353	216	100	253	63	61	30
46. Lohar (Hindu) ..	118	177	72	384	249	140	187	62	385	226	81	202	65	59	34
47. ,, (Musalman) ..	138	207	77	360	218	154	202	70	365	209	97	239	61	57	32
48. Machhi (Musalman)	144	196	81	355	224	162	209	67	353	209	100	253	63	59	30
49. Mahtam (Sikh) ..	177	221	76	321	205	201	229	70	329	171	127	320	64	52	27
50. Mali (Hindu) ..	125	191	72	391	221	156	202	68	376	198	87	223	56	53	34

SUBSIDIARY TABLE IV.

BASED ON IMPERIAL TABLE XIV.

Age distribution of 1,000 of each sex in certain castes.—*continued.*

SUBSIDIARY TABLE IV-A.

Proportion of children under 12 and of persons over 40 to those aged 15—40 in certain castes, also of married females aged 15—40 per 100 females.—*continued*

Caste.	Males.—Number *per mille* aged					Females.—Number *per mille* aged					Proportion of children both sexes per 100.		Proportion of persons over 40 per 100 aged 15—40.		Number of married females aged 15—40 per 100 females of all ages.
	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	Persons aged 15—40.	Married females aged 15—40.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
51. Mahar (Musalman) ..	143	203	91	332	231	135	193	73	370	229	97	219	70	62	32
52. Mallah (Musalman)	151	206	76	348	219	152	214	68	375	191	100	253	63	51	31
53. Meo (Musalman) .	133	197	80	414	176	141	198	71	408	182	81	202	42	45	36
54. Mirasi (Musalman)	135	194	77	362	232	148	196	66	362	228	93	240	64	63	30
55. Mochi (Musalman)	137	184	84	365	230	160	202	66	355	217	94	241	63	61	31
56. Mughal (Musalman)	134	185	74	367	240	136	181	69	383	231	85	214	65	60	32
57. Mussali (Musalman).	148	213	78	346	215	169	221	73	351	186	107	276	62	53	29
58. Nai (Hindu) ..	123	180	73	385	239	140	194	63	371	232	84	219	62	62	33
59. ,, (Sikh) ..	119	179	74	384	244	140	196	69	349	246	85	241	64	71	30
60. ,, (Musalman) ..	133	199	76	357	235	159	199	68	353	221	97	249	66	63	30
61. Pakhiwara (Musalman).	135	224	72	332	237	186	217	46	343	208	113	276	72	61	30
62. Pathan (Musalman)	122	179	71	395	233	141	194	66	374	225	82	225	59	60	31
63. Qassab (Musalman)	132	197	84	376	211	152	189	85	374	200	89	222	56	54	32
64. Qureshi (Musalman)	129	190	78	365	238	136	182	70	382	230	85	224	65	60	30
65. Rajput (Hindu) ..	99	162	73	413	253	117	170	66	398	249	67	190	61	62	32
66. ,, (Musalman)	134	192	78	373	223	149	198	71	368	214	91	243	56	59	30
67. Saini (Hindu) ..	103	176	78	367	276	134	189	64	345	268	84	211	75	78	31
68. ,, (Sikh) ..	127	188	81	389	215	143	188	61	364	244	85	216	55	67	33
69. Sansi (Hindu) ..	138	195	81	353	233	158	201	77	356	208	97	278	66	58	30
70. Sayad (Musalman)	125	189	77	365	244	138	191	67	370	234	87	233	67	63	29
71. Sheikh (Musalman).	114	161	75	411	239	146	191	66	382	215	76	210	58	56	33
72. Sunar (Hindu) ..	132	165	79	388	236	155	165	71	381	228	80	212	61	60	32
73. ,, (Musalman) ..	184	97	87	397	235	152	200	68	377	203	81	217	59	54	31
74. Tarkhan (Hindu) ..	122	188	70	381	239	147	200	65	366	222	87	221	63	61	33
75. ,, (Sikh) ..	128	167	78	375	252	145	175	71	372	237	82	210	67	64	33
76. ,, (Musalman)	143	193	79	357	228	161	192	66	367	214	95	239	64	58	32
77. Teli (Musalman) ..	142	203	79	365	211	161	206	67	357	209	98	247	58	59	31

SUBSIDIARY TABLE IV.

BASED ON IMPERIAL TABLE XIV.

Age distribution of 1,000 of each sex in certain castes.

DELHI.

SUBSIDIARY TABLE IVA.

Proportion of children under 12 and of persons over 40 to those aged 15—40 in certain castes, also of married females aged 15—40 per 100 females.

Castes.	Males.—Number *per mille* aged					Females.—Number *per mille* aged					Proportion of children both sexes per 100.		Proportion of persons over 40 per 100 aged 15—40.		Number of married females aged 15—40 per 100 females of all ages.
	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—39 (inclusive).	40 and over.	Persons aged 15—40.	Married females aged 15—40.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Aggarwal (Hindu) ..	102	134	60	450	254	122	150	47	437	244	56	155	56	56	38
2. ,, (Jain) ..	108	119	93	429	251	134	152	45	446	223	58	158	59	50	37
3. Ahir (Hindu) ..	155	114	65	447	219	145	172	60	397	226	68	192	49	57	36
4. Arain (Musalman)	130	183	65	446	176	177	161	62	389	211	77	195	39	54	36
5. Brahman (Hindu) ..	91	123	63	512	211	127	160	49	420	244	51	173	41	58	35
6. Chamar (Hindu) ..	109	149	68	468	206	146	180	58	453	163	62	160	44	36	42
7. Churah (Hindu) ..	118	184	88	427	183	164	193	59	423	161	77	192	43	38	39
8. Dhanak (Hindu) ..	110	129	86	490	185	148	175	55	443	179	57	182	38	40	41
9. Dhobi (Hindu) ..	113	173	51	490	173	143	181	41	442	193	64	173	35	44	40
10. ,, (Musalman)	138	161	73	419	209	170	202	53	425	144	79	223	50	34	33
11. Dagi or Koli (Hindu)	83	108	64	571	174	129	177	50	489	155	44	134	31	32	45
12. Faqir (Musalman) ..	141	190	80	415	174	179	200	66	379	176	89	212	42	46	35
13. Gujjar (Hindu) ..	114	182	70	415	219	149	117	106	417	211	68	181	53	50	37
14. Jat (Hindu) ..	114	169	70	448	199	159	175	59	394	213	72	185	44	54	37
15. Jhiwar (Hindu) ..	88	176	51	558	127	135	172	40	447	206	54	181	23	46	41
16. Julaha (Hindu) ..	102	147	53	482	216	133	162	76	448	181	58	147	45	40	42
17. Khatri (Hindu) ..	74	120	61	529	216	124	171	48	448	209	48	139	41	47	40
18. Kumhar (Hindu) ..	108	152	59	512	169	150	201	50	429	170	63	174	33	40	39
19. Lohar (Hindu) ..	117	154	72	469	188	146	202	50	390	212	69	205	40	54	30
20. Machhi (Musalman)	83	96	204	431	186	118	194	32	503	153	49	155	43	30	45
21. Mali (Hindu)	101	125	57	468	249	125	154	54	449	218	54	144	53	48	40
22. Meo (Musalman) ..	136	157	72	431	204	162	174	55	424	185	73	183	47	44	39
23. Mughal (Musalman)	115	157	70	409	249	195	159	71	310	265	84	273	61	86	26
24. Nai (Hindu) ..	118	171	60	453	198	131	186	48	426	209	68	173	44	49	38
25. Pathan (Musalman)	88	127	72	451	262	119	140	57	469	215	51	138	58	46	43
26. Qureshi (Musalman)	122	133	74	450	221	127	219	90	388	176	70	227	49	45	29
27. Rajput (Hindu) ..	79	135	62	505	219	133	168	54	453	192	51	167	43	42	40
28. ,, (Musalman)	80	132	67	467	254	157	182	39	428	194	57	176	54	45	39
29. Saini (Hindu) ..	128	198	72	385	217	171	207	56	374	192	93	218	57	51	34
30. Sansi (Hindu) ..	117	143	19	468	253	73	173	100	482	172	54	156	54	36	39
31. Sayad (Musalman)	113	159	66	436	226	129	194	64	367	246	72	261	52	67	27
32. Sheikh (Musalman)	102	127	95	454	222	137	177	87	410	189	61	163	49	46	38
33. Sunar (Hindu) ..	84	142	54	460	260	129	153	53	423	242	56	156	57	57	36
34. Tarkhan (Hindu) ..	73	119	84	526	198	142	155	44	460	199	46	148	39	43	42
35. Teli (Musalman) ..	119	167	73	425	216	178	207	85	364	166	84	215	51	46	34

SUBSIDIARY TABLE V.

Population of children under 10 and of persons over 60 to those aged 15—40 and also of married females aged 15—40 per 100 females.

District or State and Natural Division.	Proportion of children both sexes per 100. Persons aged 15—40. 1921.	1911.	1901.	1891.	Married females aged 15—40. 1921.	1911.	1901.	1891.	Proportion of persons aged 60 and over per 100, aged 15—40. 1921. Males.	1921. Females.	1911. Males.	1911. Females	1901. Males.	1901. Females.	1891. Males.	1891. Females.	Number of married females aged 15—40 per 100 females of all ages. 1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PUNJAB AND DELHI	76	69	67	71	198	179	168	176	18	17	15	14	15	15	8	7	32	34	34	37
PUNJAB	77	..	..	..	199	..	..	..	18	17	..	..	..	..	..	..	32	..	..	..
Indo-Gangetic Plain West (Total).	75	64	64	68	198	170	159	169	17	16	18	18	14	14	7	6	32	35	35	38
Indo-Gangetic Plain (Punjab).	76	..	..	..	200	..	..	..	17	16	..	..	..	..	..	..	32	..	..	..
1. Hissar	87	64	58	77	214	166	150	191	16	15	11	12	12	14	7	6	31	36	34	36
2. *Loharu State* ..	104	75	55	80	242	176	139	200	24	15	16	18	13	17	7	6	30	35	34	35
3. Rohtak ..	77	62	67	67	186	153	154	160	14	13	12	13	13	14	6	5	34	36	36	39
4. *Dujana State* ..	87	74	66	76	195	169	150	175	25	19	19	17	17	17	8	6	32	35	34	37
5. Gurgaon ..	72	61	71	61	178	150	166	149	13	13	12	12	12	13	4	4	34	35	35	40
6. *Pataudi State* ..	75	63	69	60	185	147	151	150	19	16	16	16	15	16	5	4	32	36	36	39
7. Karnal ..	72	57	59	60	187	148	150	156	13	11	10	9	10	10	5	4	34	37	36	39
8. Jullundur ..	75	68	67	70	192	174	157	168	25	22	19	19	19	19	8	8	31	34	35	39
9. *Kapurthala State* ..	76	70	70	72	197	185	166	180	22	20	17	16	18	17	8	7	32	33	35	37
10. Ludhiana ..	74	63	61	66	197	171	154	160	20	19	15	14	18	18	8	6	31	34	35	39
11. *Malerkotla State* ..	64	56	65	70	188	154	153	167	19	21	15	14	20	18	7	6	32	35	35	38
12. Ferozepore ..	81	67	65	76	217	187	172	191	17	17	12	13	13	13	7	6	31	34	33	37
13. *Faridkot State* ..	78	68	66	82	211	185	180	208	15	17	12	13	12	13	7	7	31	36	33	36
14. *Patiala State* ..	75	61	57	64	193	165	147	163	17	16	13	13	14	15	6	5	32	35	35	38
15. *Jind State* ..	81	61	59	67	207	156	148	171	16	15	12	13	13	14	6	5	32	37	35	38
16. *Nabha State* ..	74	63	61	67	198	168	157	169	19	18	15	15	15	16	6	5	31	35	35	38
17. Lahore ..	71	63	66	73	210	184	171	184	15	19	12	15	14	14	7	6	31	34	35	38
18. Amritsar ..	74	67	70	75	197	180	167	178	20	20	16	16	18	16	8	7	32	34	35	39
19. Gujranwala ..	72	78	72	70	201	208	179	173	18	17	16	15	18	15	8	7	30	32	34	38
20. Sheikhupura ..	82	*	*	*	224	*	*	*	18	17	*	*	*	*	*	*	31	*	*	*
Himalayan ..	61	58	57	61	148	141	139	154	21	18	17	16	16	15	9	8	35	36	36	38
21. *Nahan State* ..	56	57	57	59	133	137	135	150	17	15	15	14	14	13	6	5	39	39	39	42
22. Simla	27	32	30	35	120	121	117	129	7	12	8	11	7	11	3	5	38	37	38	40
23. *Simla Hill States* ..	53	53 (23 and 24)	52	57	131	129 (23 and 24)	126	139	18	16	16 (23 and 24)	16	15	15	9	8	35	36 (23 and 24)	37	39
24. *Bilaspur State* ..	58				141				24	20							35			
25. Kangra ..	68	63	61	65	160	150	149	163	23	18	18	16	16	15	9	7	34	35	35	36
26. *Mandi State* ..	67	61	58 (26 and 27)	67	158	144	130 (26 and 27)	158	21	18	19	16	16 (26 and 27)	15	11	19	34	36	36 (26 and 27)	37
27. *Suket State* ..	51	47		60	128	119		152	16	14	14	12			7	6	37	38		37
28. *Chamba State* ..	61	59	59	63	147	138	138	148	26	21	24	19	24	20	13	10	34	36	35	38
Sub-Himalayan ..	78	71	68	71	196	182	166	176	22	19	18	16	17	16	9	8	31	33	34	37
29. Ambala	66	53	54	58	179	151	141	154	16	15	12	12	12	14	6	6	33	35	36	39
30. *Kalsia State* ..	67	57	60	65	184	158	155	167	17	15	13	12	13	14	6	5	33	35	35	38
31. Hoshiarpur ..	75	68	66	71	180	168	154	167	26	22	21	19	19	19	9	9	32	34	35	38
32. Gurdaspur ..	82	75	71	74	214	199	173	193	20	18	16	15	16	15	7	6	31	33	35	36
33. Sialkot ..	84	82	75	73	214	209	176	170	24	21	20	18	19	18	9	8	30	32	34	39
34. Gujrat	84	79	72	78	207	193	176	186	24	20	20	17	18	17	10	8	30	32	32	36
35. Jhelum.. ..	81	69	72	78	186	170	172	191	28	21	21	17	21	17	12	11	31	33	32	34
36. Rawalpindi ..	68	65	68	72	177	166	173	187	19	17	17	15	16	14	9	8	34	34	34	36
37. Attock ..	86	80	*	*	203	194	*	*	21	18	17	15	*	*	*	*	31	32	*	*
North-West Dry Area.	83	81	78	84	219	209	202	212	17	15	16	14	16	14	9	8	31	32	32	35
38. Montgomery ..	86	84	79	91	237	227	214	233	19	15	17	15	17	14	11	9	29	30	30	33
39. Shahpur ..	83	76	78	76	221	204	206	213	19	17	16	14	21	17	12	10	30	31	29	33
40. Mianwali ..	85	90	82	*	214	222	198	*	17	16	17	15	16	14	*	*	31	30	33	*
41. Lyallpur ..	94	85	72	*	248	229	195	*	18	17	15	15	15	12	*	*	30	32	34	*
42. Jhang	90	83	81	91	239	220	210	226	22	18	19	16	21	16	13	10	28	30	30	32
43. Multan ..	79	79	77	78	218	206	201	205	16	14	15	14	14	13	7	7	30	32	33	35
44. *Bahawalpur State* ..	76	74	77	80	195	189	200	204	16	13	15	13	15	15	6	6	34	34	33	37
45. Muzaffargarh ..	77	78	78	80	192	190	193	187	16	13	15	13	14	13	7	6	33	34	34	37
46. Dera Ghazi Khan ..	80	84	86	85	198	202	209	209	16	14	17	15	16	15	8	7	34	34	34	36
DELHI	54	..	..	..	150	..	..	..	9	10	..	..	..	..	..	..	38	..	..	..
Indo Gangetic Plain West.	54	..	..	..	150	..	..	..	9	10	..	..	..	..	..	..	38	..	..	..
1. Delhi	54	..	..	..	150	..	..	..	9	10	..	..	..	..	..	..	38	..	..	..

Note.—*Figures not available.

SUBSIDIARY TABLE V-A.

Proportion of children under 10 and of persons over 60 to those aged 15—40 in certain religions, and also of married females aged 15—40 per 100 females.

Natural Division and Religion.	Proportion of children both sexes per 100. Persons aged 15—40.		Married females aged 15—40.		Proportion of persons aged 60 and over per 100, aged 15—40. 1921.		1911.		Proportion of married females aged 15—40 per 100 females of all ages.	
	1921.	1911.	1921.	1911.	Males.	Females.	Males.	Females.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB AND DELHI	76	69	198	179	18	17	15	14	32	34
PUNJAB	77	..	199	..	18	17	..	..	32	..
INDO-GANGETIC PLAIN WEST (TOTAL).	75	64	198	170	17	16	13	13	32	35
Hindu	73	61	193	162	15	15	12	12	33	36
Musalman	78	68	204	179	17	16	14	14	32	34
Christian	77	60	215	197	14	13	8	10	32	33
Jain	66	56	181	158	12	12	10	12	32	33
Sikh	72	64	195	174	21	21	16	16	32	35
INDO-GANGETIC PLAIN WEST (PUNJAB).	76	..	200	..	17	16	..	..	32	..
Hindu	75	..	197	..	15	15	..	..	32	..
Musalman	79	..	206	..	19	16	..	..	31	..
Christian	82	..	221	..	15	13	..	..	32	..
Jain	68	..	184	..	12	12	..	..	31	..
Sikh	72	..	195	..	21	21	..	..	32	..
HIMALAYAN	61	58	148	141	21	18	17	16	35	36
Hindu	61	58	147	140	21	18	17	16	35	36
Musalman	61	57	174	150	19	15	16	13	34	37
Christian	48	54	183	204	7	10	9	8	22	22
Jain	32	53	96	186	18	19	19	12	41	27
Sikh	53	52	152	137	15	14	15	14	37	39
SUB-HIMALAYAN	78	71	196	182	22	19	18	16	31	33
Hindu	71	65	187	174	20	19	16	16	32	33
Musalman	81	75	200	187	23	19	18	15	31	33
Christian	78	66	233	241	16	16	9	12	30	30
Jain	68	59	188	182	14	13	12	13	32	29
Sikh	74	67	190	173	24	21	20	18	32	34
NORTH-WEST DRY AREA	83	81	219	209	17	15	16	14	31	32
Hindu	74	70	203	188	13	13	12	13	32	34
Musalman	85	83	221	212	18	15	17	15	31	32
Christian	94	84	255	281	16	14	13	12	30	27
Jain	62	69	203	163	9	10	5	9	31	37
Sikh	85	77	219	202	18	16	15	13	32	34
DELHI	54	..	150	..	9	10	..	..	38	..
INDO-GANGETIC PLAIN WEST	54	..	150	..	9	10	..	..	38	..
Hindu	53	..	146	..	9	10	..	..	39	..
Musalman	58	..	161	..	11	11	..	..	37	..
Christian	40	..	155	..	4	6	..	..	35	..
Jain	52	..	162	..	12	11	..	..	32	..
Sikh	29	..	134	..	4	5	..	..	45	..

SUBSIDIARY TABLE VI.

Variation in Population at certain age-periods.

District or State and Natural Division.	Period.	Variation per cent. in Population (Increase +, Decrease —). All ages.	0—9 (inclusive).	10—14 (inclusive).	15—39 (inclusive).	40—59 (inclusive).	60 and over.
1	2	3	4	5	6	7	8
PUNJAB AND DELHI	1891—1901	+8·2	−5·1	+27·2	−·2	+27·1	+108·9
	1901—1911	−2·2	+·3	−6·2	−1·9	−3·2	−4·6
	1911—1921	+5·8	+10·8	+10·1	−·1	+4·2	+18·3
I. INDO-GANGETIC PLAIN WEST (TOTAL)	1891—1901	+6·8	−8·2	+24·3	−2·4	+28·5	+120·9
	1901—1911	−7·9	−6·2	−12·9	−5·8	+10·6	−12·9
	1911—1921	+8·2	+17·2	+12·3	+·3	+5·7	+24·1
1. Hissar	1891—1901	+·7	−24·7	+24·3	+·0	+26·1	+85·3
	1901—1911	+3·0	+18·0	−23·3	+6·3	−3·2	−3·9
	1911—1921	+1·5	+15·5	+30·1	−12·4	−3·1	+14·7
2. *Loharu State*	1891—1901	−24·4	−47·3	−5·6	−22·5	−11·6	+69·0
	1901—1911	+22·1	+57·6	−14·7	+15·1	+19·2	+34·2
	1911—1921	+10·9	+30·3	+32·5	−6·0	+5·6	+9·3
3. Rohtak	1891—1901	+6·8	−5·2	+25·1	−4·7	+33·3	+11·8
	1901—1911	−14·1	−15·7	−16·9	−9·7	−19·1	−17·0
	1911—1921	+42·6	+63·8	+41·2	+33·0	+31·0	+45·9
4. *Dujana State*	1891—1901	−8·6	−27·5	+15·5	−15·8	+13·4	+96·3
	1901—1911	+5·4	+18·4	−15·8	+5·1	+1·1	+12·0
	1911—1921	+1·4	+6·9	+24·3	−8·7	−3·0	+11·1
5. Gurgaon	1891—1901	+11·6	+8·6	+23·2	−6·1	+47·3	+185·1
	1901—1911	−13·8	−23·0	+·4	−11·0	−14·4	−14·1
	1911—1921	+6·0	+20·6	−3·6	+2·8	−2·3	+12·3
6. *Pataudi State*	1891—1901	+15·4	+13·0	+32·8	−2·7	+36·3	+224·2
	1901—1911	−10·9	−19·3	+2·9	−11·6	−4·5	−9·9
	1911—1921	−7·4	+3·8	−7·4	−11·8	−15·0	−1·6
7. Karnal	1891—1901	+29·2	+15·4	+49·0	+17·3	+64·5	+159·1
	1901—1911	−9·4	−10·6	−13·6	−6·7	−10·7	−13·0
	1911—1921	+3·6	+19·8	+3·5	−5·4	−·5	+18·4
8. Jullundur	1891—1901	+1·1	−13·3	+30·0	−0·1	+14·2	+116·2
	1901—1911	−12·6	−11·6	−15·7	−12·8	−11·1	−14·2
	1911—1921	+2·6	+6·5	+1·8	−2·7	+·3	+23·2
9. *Kapurthala State*	1891—1901	+4·9	−8·0	+31·0	−5·8	+23·1	+112·6
	1901—1911	−14·7	−15·2	−9·0	−15·2	−15·4	−17·9
	1911—1921	+6·0	+11·2	−4·1	+2·7	+3·6	+29·8
10. Ludhiana	1891—1901	+3·8	−9·4	+11·7	−5·6	+22·4	+135·4
	1901—1911	−23·2	−21·5	−24·4	−20·7	−25·4	−35·0
	1911—1921	+9·7	+18·6	+11·0	+·4	+9·0	+35·2
11. *Malerkotla State*	1891—1901	+2·3	−19·0	+20·7	−8·0	+21·1	+176·6
	1901—1911	−8·2	−12·2	−19·8	+1·8	−19·9	−23·6
	1911—1921	+12·9	+19·5	+13·6	+4·7	+13·0	+42·1
12. Ferozepore	1891—1901	+8·1	−11·6	+30·4	+4·0	+32·0	+94·4
	1901—1911	+·2	+6·7	−16·3	+2·8	−3·6	−1·3
	1911—1921	+14·4	+22·1	+33·6	+1·9	+13·9	+35·6
13. *Faridkot State*	1891—1901	+8·6	−13·2	+24·0	+8·4	+32·7	+103·1
	1901—1911	+4·3	+10·7	−13·6	+7·1	+·4	+4·1
	1911—1921	+15·6	+18·9	+41·4	+3·9	+17·8	+34·9
14. *Patiala State*	1891—1901	+·8	−16·1	+9·0	−6·3	+26·2	+125·9
	1901—1911	−11·8	−4·3	−20·9	−9·4	−18·6	−19·0
	1911—1921	+6·5	+17·7	+18·7	−4·8	+4·9	+5·9
15. *Jind State*	1891—1901	−·9	−19·1	+16·5	−8·4	+26·2	+121·4
	1901—1911	−3·6	+3·2	−17·8	+·5	−11·7	−5·2
	1911—1921	+13·4	+31·6	+26·8	−·9	+9·3	+24·8
16. *Nabha State*	1891—1901	+5·4	−11·6	+16·6	−3·2	+29·8	+153·2
	1901—1911	−16·5	−12·0	−24·3	−14·4	−20·9	−18·8
	1911—1921	+5·8	+12·4	+16·7	−3·9	+6·2	+22·7

SUBSIDIARY TABLE VI.

Variation in Population at certain age-periods—*continued.*

District or State and Natural Division.	Period.	Variation per cent. in Population (Increase +, Decrease —). All ages.	0—9 (inclusive).	10—14 (inclusive).	15—39 (inclusive).	40—59 (inclusive).	60 and over.
1	2	3	4	5	6	7	8
17. Lahore	1891—1901 ..	+8·1	−8·1	+36·6	+1·7	+26·1	+104·0
	1901—1911 ..	−10·8	−11·8	−21·5	−7·2	−9·6	−13·0
	1911—1921 ..	+9·2	+15·3	+11·3	+2·5	+9·2	+26·7
18. Amritsar	1891—1901 ..	+3·1	−12·1	+33·8	−5·8	+18·1	+115·5
	1901—1911 ..	−14·0	−15·5	−13·7	−12·3	−13·6	−18·9
	1911—1921 ..	+5·5	+11·3	−·4	−·9	+4·4	+23·8
19. Gujranwala	(1891—1901 ..	+9·7	+4·3	+10·9	+·3	+20·3	+109·3
	(1901—1911 ..	+22·0	+27·0	−32·7	+17·6	+20·2	+13·4
	(1911—1921 ..	−32·5	−38·3	−27·9	−32·9	−27·1	−24·2
20. Sheikhupura	1891—1901 ..	Included in the District of Lahore, Gujranwala and Sialkot.					
	1901—1911 ..						
	1911—1921 ..	+100·0	+100·0	+100·0	+100·0	+100·0	+100·0
II. HIMALAYAN	1891—1901 ..	+2·7	−11·7	+18·2	−4·7	+22·3	+82·0
	1901—1911 ..	+2·0	+3·7	−6·9	+1·7	+4·5	+7·4
	1911—1921 ..	+·8	+2·5	+3·0	−2·8	+·9	+12·4
21. *Nahan State*	1891—1901 ..	+9·3	−6·6	+23·2	−1·7	+45·3	+133·9
	1901—1911 ..	+2·1	+4·2	−14·2	+4·1	+2·5	+9·5
	1911—1921 ..	+1·4	−2·2	+15·5	−1·4	+3·6	+7·1
22. Simla	1891—1901 ..	−9·6	−26·7	−3·1	−13·9	+13·4	+74·8
	1901—1911 ..	−2·6	+4·1	+1·2	−5·6	−4·6	+11·6
	1911—1921 ..	+15·3	+2·1	+3·8	+23·4	+10·8	+14·6
23. *Simla Hill States*	1891—1901 ..	+5·2	−10·4	+15·0	−1·9	+27·7	+78·0
	1901—1911 ..	+3·9	+6·2	−3·7	+3·2	+6·1	+6·6
	1911—1921 ..	+·1	−·2	+1·2	−2·6	+1·1	+13·6
24. *Bilaspur State*	1891—1901 ..	Included in Simla Hill States.					
	1901—1911 ..						
	1911—1921 ..	+100·0	+100·0	+100·0	+100·0	+100·0	+100·0
25. Kangra	1891—1901 ..	+·7	−12·9	+18·8	−7·6	+21·0	+82·5
	1901—1911 ..	+·3	+2·2	−10·5	−·3	+3·6	+8·9
	1911—1921 ..	−·6	+3·2	+1·2	−5·5	−·9	+12·7
26. *Mandi State*	1891—1901 ..	+5·1	−7·3	+17·5	+1·1	+13·7	+67·9
	1901—1911 ..	+3·2	+2·4	−1·5	+3·1	+7·1	+5·4
	1911—1921 ..	+2·2	+7·0	+5·1	−2·7	+·9	+12·4
27. *Suket State*	1891—1901 ..	+1·6	−19·9	+17·1	+1·8	+11·2	+88·1
	1901—1911 ..	+3·2	+2·4	−1·5	+3·1	+7·1	+5·4
	1911—1921 ..	−1·1	+3·9	−9·6	−4·3	+1·0	+15·9
28. *Chamba State*	1891—1901 ..	+3·1	−11·1	+29·5	−5·4	+12·5	+77·0
	1901—1911 ..	+6·3	+7·7	+2·2	+7·7	+5·0	+3·7
	1911—1921 ..	+4·4	+4·4	+9·8	+1·3	+5·1	+11·1
III. SUB-HIMALAYAN	1891—1901 ..	−4·1	−15·7	+11·2	−12·0	+12·8	+81·7
	1901—1911 ..	−5·9	−3·2	−7·4	−7·4	−5·8	−6·0
	1911—1921 ..	+·6	+3·7	+3·9	−5·1	+·7	+14·7
29. Ambala	1891—1901 ..	−21·1	−32·7	−16·1	−27·1	+1·4	+67·2
	1901—1911 ..	−15·4	−14·9	−20·3	−13·3	−16·8	−19·3
	1911—1921 ..	−1·2	+10·9	−·1	−13·8	−1·3	+18·9
30. *Kalsia State*	1891—1901 ..	−2·1	−17·3	+7·1	−9·6	+25·1	+122·6
	1901—1911 ..	−16·8	−17·0	−22·1	−13·7	−19·7	−17·9
	1911—1921 ..	+2·6	+11·1	+0·6	−5·2	+5·4	+22·7
31. Hoshiarpur	1891—1901 ..	−2·2	−16·7	+16·2	−10·5	+14·5	+85·2
	1901—1911 ..	−7·2	−4·8	−10·1	−8·3	−7·7	−3·4
	1911—1921 ..	+·9	+4·8	+·9	−4·3	+·8	+14·5
32. Gurdaspur	1891—1901 ..	−·4	−13·9	+31·2	−10·1	+17·0	+112·9
	1901—1911 ..	−11·0	−7·3	−12·2	−12·0	−13·1	−13·8
	1911—1921 ..	+1·8	+5·3	+6·2	−3·6	−·4	+17·8

SUBSIDIARY TABLE VI.

Variation in Population at certain age-periods—*concluded.*

District or State and Natural Division.	Period.	*Variation per cent. in Population (Increase +, Decrease —).* All ages.	0—9 (inclusive).	10—14 (inclusive).	15—39 (inclusive).	40—59 (inclusive).	60 and over.
1	2	3	4	5	6	7	8
33. Sialkot	1891—1901 ..	−3·2	−10·2	+10·6	−12·8	+7·0	+91·2
	1901—1911 ..	−9·6	−6·0	−2·5	−14·1	−8·9	−12·7
	1911—1921 ..	−4·3	−5·9	+·9	−7·8	−2·7	+9·0
34. Gujrat	1891—1901 ..	−1·4	−14·1	+7·7	−6·9	+14·7	+80·2
	1901—1911 ..	−·7	+4·1	−3·3	−4·6	+1·0	+2·5
	1911—1921 ..	+10·5	+11·5	+19·1	+4·4	+12·0	+20·9
35. Jhelum	1891—1901 ..	−2·5	−14·8	+11·9	−7·7	+11·5	+52·2
	1901—1911 ..	−13·9	−16·5	−17·3	−12·7	−10·2	−13·4
	1911—1921 ..	−6·7	−·5	−2·6	−14·8	−7·5	+8·8
36. Rawalpindi	1891—1901 ..	+4·9	−8·3	+25·6	−2·8	+27·1	+76·7
	1901—1911 ..	−41·1	−43·2	+43·0	−40·1	−40·0	−38·0
	1911—1921 ..	+3·9	+6·2	+2·3	+1·6	+2·9	+13·9
37. Attock	1891—1901	Not available.					
	1901—1911 ..	+100·0	+100·0	+100·0	+100·0	+100·0	+100·0
	1911—1921 ..	−1·3	−·0	+3·4	−6·9	+·2	+13·9
IV. NORTH-WEST DRY AREA	1891—1901 ..	+89·7	+23·7	+75·2	+32·4	+51·7	+142·4
	1901—1911 ..	+15·1	+17·1	+12·9	+18·6	+17·8	+12·7
	1911—1921 ..	+7·9	+8·7	+14·3	+5·2	+6·3	+13·7
38. Montgomery	1891—1901 ..	−7·2	−21·4	+22·1	−9·6	+1·4	+44·9
	1901—1911 ..	+15·5	+21·2	+5·2	+14·3	+15·3	+15·8
	1911—1921 ..	+33·3	+33·1	+44·2	+30·2	+31·2	+38·7
39. Shahpur	1891—1901 ..	+6·2	−8·0	+25·0	+1·2	+19·4	+74·2
	1901—1911 ..	+13·1	+33·2	+28·2	+36·3	+27·6	+8·2
	1911—1921 ..	+4·7	+7·4	+4·4	−1·2	+9·5	+18·5
40. Mianwali	1891—1901 ..	+100·0	+100·0	+100·0	+100·0	+100·0	+100·0
	1901—1911 ..	−19·6	−16·8	−18·2	−23·8	−17·2	−16·7
	1911—1921 ..	+4·9	+1·8	+6·1	+7·0	+4·0	+9·7
41. Lyallpur	1891—1901 ..	+100·0	+100·0	+100·0	+100·0	+100·0	+100·0
	1901—1911 ..	+8·3	+21·3	+·6	+3·2	+2·1	+10·3
	1911—1921 ..	+14·3	+16·6	+34·7	+5·7	+11·9	+24·6
42. Jhang	1891—1901 ..	−13·3	−24·9	+5·5	−16·2	−6·4	+40·6
	1901—1911 ..	+36·1	+38·3	+36·4	+35·6	+36·9	+27·3
	1911—1921 ..	+10·7	+14·3	+13·0	+5·7	+10·7	+17·6
43. Multan	1891—1901 ..	+12·5	+4·3	+23·8	+5·9	+17·6	+108·1
	1901—1911 ..	+14·7	+14·0	+18·6	+10·7	+23·3	+16·6
	1911—1921 ..	+9·2	+9·1	+14·2	+9·0	+5·6	+11·3
44. *Bahawalpur State*	1891—1901 ..	+10·9	−2·4	+51·0	+1·3	+24·5	+143·7
	1901—1911 ..	+8·3	+5·2	+6·0	+9·5	+15·6	+1·2
	1911—1921 ..	+·1	+1·8	+1·7	−·5	−4·3	+4·8
45. Muzaffargarh	1891—1901 ..	+6·4	−3·1	+38·9	−9·9	+12·4	+98·7
	1901—1911 ..	+40·4	+37·9	+36·1	+28·2	+51·9	+49·2
	1911—1921 ..	−·2	−1·7	+6·0	−·2	−2·2	+1·4
46. Dera Ghazi Khan	1891—1901 ..	+14·9	+6·9	+44·3	+4·8	+25·4	+110·5
	1901—1911 ..	+12·2	+8·7	+13·7	+11·8	+18·2	+14·9
	1911—1921 ..	−6·2	−9·3	−1·8	−4·6	−5·7	−8·9

SUBSIDIARY TABLE VII.

Reported birth-rate by sex and Natural Divisions.

(FOR BRITISH TERRITORY ONLY).

Year.	Number of births per 1,000 of total population (census of 1911.)											
	Punjab.		*Indo-Gangetic Plain West.*		*Himalayan.*		*Sub-Himalayan.*		*North-West Dry Area..*		*Delhi.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	2	3	4	5	6	7	8	9	10	11	12	13
1911	23	21	24	22	18	17	22	20	23	20	21	20
1912	23	21	25	23	20	18	23	21	23	20	24	23
1913	23	21	25	23	19	18	22	21	23	20	22	21
1914	24	22	26	24	18	17	23	21	23	21	24	23
1915	23	21	24	22	19	18	21	20	22	19	25	24
1916	24	21	25	23	17	16	22	20	24	21	26	24
1917	23	21	26	24	19	17	22	20	22	19	28	26
1918	21	18	22	20	19	17	21	19	18	16	25	23
1919	21	19	22	20	17	15	19	17	22	19	24	22
1920	22	20	23	21	18	17	21	19	23	20	24	23

NOTE.—(*a*) Figures of population are those given in Imperial Table II of 1921 for 1911, and do not include figures for Biloch Trans-Frontier Tract.

(*b*) Figures of births of 1911 and 1912 for Delhi not being available, the adjusted figures for 1911 and the average of the remaining years for 1912, have been assumed to represent the figures of each of these years.

SUBSIDIARY TABLE VIII.

Reported death-rate by sex and Natural Divisions.

(FOR BRITISH TERRITORY ONLY.)

Year.	Number of deaths per 1,000 of total population (census of 1911.)											
	Punjab.		*Indo-Gangetic Plain West.*		*Himalayan.*		*Sub-Himalayan.*		*North-West Dry Area.*		*Delhi.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13
1911	31	36	34	41	30	33	33	37	23	25	50	60
1912	25	28	27	30	24	27	25	28	22	23	40	50
1913	28	32	31	35	25	27	29	32	24	26	35	42
1914	30	34	32	37	28	31	30	35	25	28	33	41
1915 ..	33	39	34	39	29	32	41	49	25	27	27	32
1916	29	32	29	33	33	36	30	33	27	31	30	37
1917	35	40	34	40	30	31	32	36	41	47	30	37
1918	74	87	86	108	51	52	63	72	70	77	81	111
1919	27	29	28	31	30	32	26	28	26	27	38	47
1920	28	29	28	30	40	40	29	29	24	25	33	39

NOTE.—(*a*) Figures of population are those given in Imperial Table II of 1921 for 1911, and do not include figures for Biloch Trans-Frontier Tract.

(*b*) Figures of deaths of 1911 and 1912 for Delhi not being available, the adjusted figures for 1911 and the average of the remaining years for 1912, have been assumed to represent the figures of each of these years.

(*c*) Total mortality attributable to Influenza in 1918 was 962,937 and 23,176 in the Punjab and Delhi respectively which is equivalent to nearly 5 per cent. of the population of 1911 for both the provinces.

SUBSIDIARY TABLE IX.

Reported death-rate by sex and age in decade and in selected years *per mille* living at same age according to the Census of 1911 (for Punjab and Delhi, British Territory only).

Age.	Average of decade.		1913.		1914.		1915.		1916.		1917.		1918.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
All ages	34	39	28	32	30	34	33	39	29	32	35	40	74	88
Under 1	225	213	242	229	237	230	201	193	225	211	274	262	257	243
1—4 (inclusive) ..	62	65	62	65	61	65	49	52	71	74	87	94	97	99
5—9 (inclusive)	15	18	11	12	12	14	16	21	12	13	16	18	38	47
10—14 (inclusive) ..	13	18	8	11	9	14	16	25	7	·10	9	12	39	57
15—19 (inclusive) ..	15	20	8	11	10	14	18	17	8	11	10	13	55	76
20—29 (inclusive) ..	16	20	10	12	11	14	11	20	8	11	10	14	59	75
30—39 (inclusive) ..	19	24	12	15	13	17	21	26	11	14	13	17	65	81
40—49 (inclusive) ..	25	26	16	16	19	19	27	29	16	16	20	20	72	81
50—59 (inclusive) ..	36	38	14	19	27	29	37	41	26	26	32	31	97	110
60 and over ..	79	84	36	52	69	75	84	86	71	75	86	89	146	168

NOTE.—Figures of population are those given in Imperial Table VII of 1911.

SUBSIDIARY TABLE X.

Reported deaths from certain diseases *per mille* of each sex.

SUBSIDIARY TABLE X.
Reported deaths from certain diseases *per mille* of each sex.

Year.	Punjab. Actual number of deaths. Total.	Punjab. Actual number of deaths. Males.	Punjab. Actual number of deaths. Females.	Punjab. Ratio per mille of each sex. Males.	Punjab. Ratio per mille of each sex. Females.	Actual number of deaths in Indo-Gangetic Plain West. Males.	Indo-Gangetic Plain West. Females.	Himalayan. Males.	Himalayan. Females.	Sub-Himalayan. Males.	Sub-Himalayan. Females.	North-West Dry Area. Males.	North-West Dry Area. Females.	Delhi. Actual number of deaths. Total.	Delhi. Actual number of deaths. Males.	Delhi. Actual number of deaths. Females.	Delhi. Ratio per mille of each sex. Males.	Delhi. Ratio per mille of each sex. Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FEVERS ..	4,441,214	2,287,531	2,153,683	213	245	995,475	945,439	86,489	84,309	617,840	582,395	587,727	541,540	106,212	51,086	55,126	222	301
1911 ..	293,929	154,406	139,523	14	16	63,371	56,675	7,825	7,758	45,550	41,870	37,660	33,220	8,488	3,316	5,172	14	28
1912 ..	275,040	143,313	131,727	13	15	60,423	54,626	6,097	6,180	42,177	39,719	34,616	31,202	10,620	5,108	5,512	22	30
1913 ..	331,698	170,474	161,224	16	19	72,121	67,085	6,522	6,507	52,230	50,041	39,601	37,591	10,392	5,247	5,145	23	28
1914 ..	345,501	175,535	169,966	16	19	73,755	69,828	6,685	6,944	50,734	50,403	44,361	42,791	8,469	4,196	4,273	18	23
1915 ..	284,784	146,631	138,153	14	16	60,212	56,288	6,728	6,888	40,753	39,295	38,898	35,682	6,716	3,355	3,361	15	19
1916 ..	376,003	193,553	182,450	18	21	77,239	71,612	8,625	8,870	56,229	53,405	51,460	48,563	6,891	3,414	3,477	15	19
1917 ..	510,812	259,959	250,853	24	28	101,470	97,366	7,152	6,852	64,744	62,106	86,593	84,529	6,567	3,186	3,381	14	19
1918 ..	1,487,010	651,480	635,530	61	72	315,100	322,055	16,596	15,403	157,278	150,087	162,506	147,985	29,148	13,704	15,444	59	85
1919 ..	365,045	192,459	172,586	18	20	83,704	74,535	8,595	8,311	52,227	47,494	47,933	42,246	10,574	5,293	5,281	23	28
1920 ..	371,432	199,761	171,671	19	19	88,080	75,369	11,664	10,596	55,918	47,975	44,099	37,731	8,347	4,267	4,080	19	22
PLAGUE ..	628,349	308,659	319,690	29	36	163,768	161,344	74	91	122,426	135,672	22,391	22,583	3,107	2,280	827	10	5
1911 ..	169,818	81,997	87,821	8	10	47,090	48,700	11	13	28,776	32,649	6,120	6,459	2,044	1,816	228	8	1
1912 ..	29,805	14,825	14,980	1	2	8,399	7,907	..	..	5,765	6,400	661	673	599	228	371	1	2
1913 ..	17,877	8,941	8,936	1	1	6,942	6,940	6	3	1,940	1,950	53	43	199	90	109	..	1
1914 ..	64,010	32,048	31,962	3	4	17,804	16,871	7	11	11,583	12,679	2,564	2,401	13	4	9	..	..
1915 ..	221,966	108,320	113,646	10	13	42,327	41,213	9	14	58,172	64,363	7,812	8,056	8	7	1	..	..
1916 ..	3,278	1,639	1639	..	..	416	443	..	1	1,195	1,174	28	21	34	21	13	..	..
1917 ..	8,775	4,456	4,319	..	..	2,256	2,155	9	16	2,122	2,121	69	27	4	4	..	..	..
1918 ..	95,615	48,008	47,607	5	5	33,491	32,086	32	33	10,816	12,063	3,669	3,425	186	97	89	1	1
1919 ..	11,068	5,390	5,678	1	1	3,590	3,653	..	..	975	1,112	825	913	1	..	1	..	..
1920 ..	6,137	3,035	3,102	..	..	1,363	1,376	..	..	1,082	1,161	590	565	19	13	6	..	..
SMALL POX ..	110,720	57,923	52,797	5	6	24,817	22,546	295	131	15,404	14,939	17,407	15,181	826	433	393	2	2
1911 ..	5,081	2,610	2,441	..	..	1,296	1,249	5	..	656	611	683	581	196	74	122	1	1
1912 ..	30,339	15,760	14,579	2	2	6,758	6,176	77	42	4,335	4,327	4,590	4,034	82	43	39	..	..
1913 ..	38,687	20,126	18,561	2	2	8,483	7,523	83	20	5,459	5,528	6,101	5,490	172	99	73	1	1
1914 ..	2,900	1,519	1,381	..	..	959	869	9	10	268	256	283	246	43	20	23	..	..
1915 ..	1,694	888	806	..	..	669	588	..	1	71	66	148	151	14	11	3	..	..
1916 ..	2,886	1,531	1,355	..	..	838	743	3	1	172	163	518	448	23	16	7	..	..
1917 ..	1,417	708	709	..	..	408	498	..	2	52	41	188	168	88	52	36	..	..
1918 ..	3,032	1,530	1,502	..	..	1,280	1,246	13	11	125	116	112	129	116	56	60	..	..
1919 ..	15,365	8,103	7,262	1	1	3,462	3,094	95	42	2,771	2,584	1,773	1,542	73	52	21	..	..
1920 ..	9,319	5,118	4,201	..	1	604	560	10	2	1,495	1,247	3,009	2,392	19	10	9	..	..
CHOLERA ..	40,706	23,438	17,268	2	2	14,106	9,991	672	553	5,891	4,527	2,769	2,197	352	222	130	1	1
1911 ..	1,238	901	337	..	..	150	79	2	..	744	258	5	..	22	11	11	..	..
1912 ..	1,833	1,081	752	..	..	624	378	..	..	260	208	197	160	35	22	13	..	..
1913 ..	5,811	3,267	2,544	..	..	2,384	1,715	10	8	821	773	52	48	37	25	12	..	..
1914 ..	6,656	3,857	2,799	..	..	2,597	1,755	207	148	634	574	419	322	12	9	3	..	..
1915 ..	13,196	7,513	5,683	1	1	5,505	3,997	401	376	954	802	653	508	92	67	25	1	..
1916 ..	1,651	930	721	..	..	618	494	11	2	226	159	75	66	66	40	26	..	..
1917 ..	1,365	802	563	..	..	229	116	11	5	421	336	141	106	12	6	6	..	..
1918 ..	257	151	106	..	..	109	83	13	3	16	10	13	10	3	2	1	..	..
1919 ..	8,561	4,856	3,705	1	1	1,844	1,341	12	2	1,794	1,398	1,206	964	66	31	32	..	1
1920 ..	138	80	58	..	..	46	33	5	9	21	9	8	7	7	6	1	..	..

SUBSIDIARY TABLE XI.

The ratio of the number of males, females and persons per 100,000 at the census of 1911 to those of the census of 1921, for each year of age, as recorded in the census schedules.

Age.	Males.	Females	Persons.	Age.	Males.	Females	Persons.	Age.	Males.	Females.	Persons.
1	2	3	4	1	2	3	4	1	2	3	4
Under 1 ..	1·13	1·15	1·15	34 ..	1·16	·84	1·04	68 ..	·90	·57	·82
1 ..	1·07	1·03	1·09	35 ..	·93	·98	·94	69 ..	·28	·30	·33
2 ..	·93	·99	·95	36 ..	1·30	1·15	1·26	70 ..	·94	·92	·93
3 ..	1·02	1·00	1·02	37 ..	·92	·85	·87	71 ..	·59	1·00	1·21
4 ..	·91	·94	·95	38 ..	1·09	1·05	1·08	72 ..	·44	·55	·51
5 ..	·92	·92	·94	39 ..	·69	·93	·67	73 ..	·33	·40	·39
6 ..	·96	·92	·96	40 ..	1·10	1·15	1·11	74 ..	·33	·50	·42
7 ..	·86	·90	·90	41 ..	1·19	1·56	1·31	75 ..	·47	·65	·59
8 ..	·93	·88	·93	42 ..	1·04	1·02	1·03	76 ..	·71	·69	·65
9 ..	·91	·86	·90	43 ..	1·21	·93	1·08	77 ..	·21	·67	·23
10 ..	·96	·89	·94	44 ..	·89	1·01	·97	78 ..	·22	·60	·36
11 ..	·82	·90	·85	45 ..	1·06	·90	·98	79 ..	·54	·47	·44
12 ..	1·00	·98	1·02	46 ..	1·16	1·30	1·24	80 ..	1·10	·71	·96
13 ..	·94	·86	·90	47 ..	·92	·86	·87	81 ..	·62	·67	·65
14 ..	1·06	·96	1·03	48 ..	1·02	·85	·94	82 ..	·68	·93	·88
15 ..	1·02	·94	·95	49 ..	·38	·60	·43	83 ..	·86	0	·75
16 ..	1·16	1·15	1·16	50 ..	1·08	1·07	1·06	84 ..	·56	·80	·71
17 ..	·96	·98	·95	51 ..	1·19	1·29	1·20	85 ..	·51	·55	·57
18 ..	1·08	1·06	1·06	52 ..	·88	·72	·84	86 ..	·60	·07	·20
19 ..	·86	·82	·85	53 ..	·91	·92	·88	87 ..	·50	0	·33
20 ..	1·22	1·16	1·16	54 ..	·98	·60	·78	88 ..	2·00	·25	·83
21 ..	·94	·97	·91	55 ..	·80	·79	·80	89 ..	2·00	2·25	2·00
22 ..	1·10	1·11	1·07	56 ..	1·20	1·31	1·18	90 ..	1·23	·56	·95
23 ..	·89	1·11	·95	57 ..	·77	1·07	·82	91 ..	0	2·00	·40
24 ..	·94	1·16	1·00	58 ..	·74	·73	·74	92 ..	1·75	·14	·66
25 ..	1·15	1·12	1·12	59 ..	·22	·53	·29	93 ..	4·80	8·00	4·50
26 ..	1·16	1·18	1·14	60 ..	·85	·98	·91	94 ..	·66	·67	·67
27 ..	1·13	1·32	1·17	61 ..	·95	1·07	·95	95 ..	·55	·50	·52
28 ..	1·19	1·01	1·09	62 ..	·74	·70	·75	96 ..	2·50	·10	·50
29 ..	·74	·80	·80	63 ..	·53	·86	·63	97 ..	·66	1·33	·67
30 ..	1·09	1·10	1·07	64 ..	·54	·29	·42	98 ..	0	·67	·25
31 ..	·82	1·30	·99	65 ..	·75	·64	·70	99 ..	1·00	·33	·67
32	1·09	1·12	1·13	66 ..	·92	·83	·88	100 and over	·86	·87	·97
33 ..	1·20	1·07	1·16	67 ..	1·38	1·05	1·27				

SUBSIDIARY TABLE XII.

Statement showing the Births and Deaths since 1881, Punjab (British Territory) including Delhi.

Year.	Males.			Females.			Ratio births females/males = column 5/column 2.	Ratio deaths females/males.
	Births.	Deaths.	Excess of births over deaths in the year.	Births.	Deaths.	Excess of births over deaths in the year.		
1	2	3	4	5	6	7	8	9
PUNJAB AND DELHI (1881—1890) ..	3,930,353	3,111,155	+819,198	3,407,650	2,746,390	+661,260	·87	·88
1881	374,599	279,274	+95,325	321,167	240,505	+80,662	·86	·86
1882	371,136	271,018	+100,118	319,388	233,781	+85,607	·86	·86
1883	393,321	256,348	+136,973	341,591	219,393	+122,198	·87	·86
1884	432,806	344,547	+88,259	377,106	315,751	+61,355	·87	·92
1885	390,799	269,894	+120,905	341,135	237,246	+103,889	·87	·88
1886	398,179	266,879	+131,300	345,560	234,387	+111,173	·87	·88
1887	392,469	343,479	+48,990	340,179	302,905	+37,274	·87	·88
1888	376,678	299,415	+77,263	326,435	263,814	+62,621	·87	·88
1889	406,658	315,146	+91,512	352,391	280,614	+71,777	·87	·89
1890	393,708	465,155	—71,447	342,698	417,994	—75,296	·87	·90
PUNJAB AND DELHI (1891—1900) ..	4,048,998	3,342,579	+706,419	3,668,763	3,067,397	+601,366	·91	·92
1891	341,158	289,770	+51,388	301,911	251,414	+50,497	·88	·87
1892	380,672	475,422	—94,750	338,240	432,814	—94,574	·89	·91
1893	350,215	280,423	+69,792	314,068	247,095	+66,973	·90	·88
1894	433,731	363,881	+69,850	391,359	332,545	+58,814	·90	·91
1895	428,727	289,446	+139,281	391,148	258,868	+132,280	·91	·89
1896	420,759	305,698	+115,061	385,258	276,591	+108,667	·92	·91
1897	415,410	289,543	+125,867	379,559	275,733	+103,826	·91	·95
1898	403,231	296,188	+107,043	367,488	278,620	+88,868	·91	·9
1899	474,937	284,385	+190,552	435,672	266,602	+169,070	·92	·94
1900	400,158	467,823	—67,665	364,060	447,115	—83,055	·91	·96
PUNJAB AND DELHI (1901—1910) ..	4,340,338	4,459,990	—119,652	3,945,923	4,383,718	—437,795	·91	·98
1901	373,466	372,350	+1,116	339,067	354,261	—15,194	·91	·95
1902	461,952	443,473	+18,479	418,525	443,500	—24,975	·91	1·00
1903	452,622	486,802	—34,180	410,240	498,674	—88,434	·91	1·02
1904	436,658	480,250	—43,572	397,371	506,208	—108,837	·91	1·05
1905	467,536	475,973	—8,437	425,824	480,135	—54,311	·91	1·01
1906	459,329	374,880	+84,449	418,677	368,026	+50,651	·91	·98
1907	430,253	637,357	—207,104	389,318	611,372	—222,054	·90	·95
1908	439,539	517,219	—77,680	400,522	502,906	—102,384	·91	·97
1909	369,694	326,613	+43,081	336,216	294,470	+41,746	·91	·90
1910	449,269	345,073	+104,196	410,163	324,166	+85,997	·91	·94
PUNJAB AND DELHI (1911—1920) ..	4,546,642	3,754,066	+792,576	4,121,854	3,489,687	+632,167	·91	·93
1911	452,277	345,899	+106,378	413,336	326,020	+87,316	·91	·94
1912	468,152	278,864	+189,288	427,511	254,426	+173,085	·91	·91
1913	468,597	312,500	+156,097	427,505	287,161	+140,344	·91	·92
1914	478,123	325,986	+152,137	436,270	307,166	+129,104	·91	·94
1915	451,200	366,060	+85,140	411,781	348,561	+63,220	·91	·95
1916	472,188	316,924	+155,264	429,937	290,463	+139,474	·91	·92
1917	470,666	385,645	+85,021	428,049	361,084	+66,965	·91	·94
1918	414,935	815,972	—400,937	370,451	788,571	—418,120	·89	·97
1919	423,011	300,123	+122,888	374,921	265,448	+109,473	·89	·88
1920	447,443	306,093	+141,350	402,093	260,787	+141,306	·90	·85

CHAPTER VI.

Sex.

123. Nature of the data. 124. The proportion of the sexes. 125. Comparison with other provinces, places and censuses. 126. Proportion of females to males in different castes. 127. Proportion of females to males in the different age-groups.

Nature of the Data. 123. The only instruction to be noted as regards the entry of sex in column 5 of the enumeration schedule is that, eunuchs and hermaphrodites should be entered in the column as males. Thus, though in certain parts of the Punjab (Delhi for example) there exists a fair number of eunuchs, no separate record of these has been obtained. No separate reference need be made to any of the Imperial or Provincial tables contained in Parts II and III, as practically all the census statistics have been classified according to sexes, and only the following references to the subsidiary tables printed at the end of this chapter will be necessary.

Subsidiary Table I gives the general proportion of the sexes by natural divisions, districts and States, both for the actual and "natural" population, the "natural" population excluding those who were born outside the Punjab and enumerated within it, and including those enumerated outside the Province, so far as they are known, and born within the Punjab. The corresponding figures for all the censuses since 1881, inclusive, are also given in this table.

Subsidiary Table II gives the number of females per 1,000 males for different age-periods by religions at each of the last 3 censuses, for the Punjab and Delhi together, and also for the Punjab and Delhi separately, for the Census of 1921.

Subsidiary Table III gives the proportion of females for different religions by age-groups for the Indo-Gangetic Plain West, Himalayan, Sub-Himalayan, and the North-West Dry Area, separately.

Subsidiary Table IV gives the number of females per 1,000 males for certain selected castes, the caste names under each religion being entered in alphabetical order.

Subsidiary Table V gives the actual number of births and deaths reported for each sex for each year since 1891 for British Territory only, and gives also the number of female to male births, as well as the proportion of female to male deaths for the same periods.

Subsidiary Table VI gives the number of deaths for each sex at different ages, for the six years 1913—1918 inclusive, the figures for the Punjab and Delhi being exhibited separately.

Subsidiary Table VII gives the proportion of females per 1,000 males for each Tahsil and State for the Census of 1921. these figures being necessary in order to construct the isopleths of distribution of similar sex proportions over the Province.

The proportion of the sexes. 124. In the whole of the Punjab 25,101,060 persons were enumerated, of whom 13,732,048 were males and 11,369,012 were females, being a proportion of 828 females per 1,000 males, while in the Delhi Province out of a population of 488,188 persons there were enumerated 281,633 males and 206,555 females, being a proportion of 733 females per 1,000 males. For the "natural" population the Punjab had 819 females per 1,000 males, and Delhi 788 females per 1,000 males, showing that the efflux of males from the Punjab, and the influx of males into the Delhi Province, were greater than the corresponding efflux and influx of females. In dealing in paragraph 51 of Chapter II with the subject of the accuracy of the census figures, the conclusion was tentatively arrived at that an error of 1 per cent. might be adopted as a working hypothesis of the difference between the actual and the enumerated population. It is now necessary to observe that it seems likely that the greater part of the assumed error will be due to the omission of females, and a relatively smaller part of the inaccuracy will be due to the omission of males. It might be possible, for example, that the error in the enumeration of males amounts to only, say, $\frac{1}{2}$ per cent. whereas the error of omissions in the case of females might amount to over $1\frac{1}{2}$ per cent. Adopting these figures for the error, hypothetically, we find that the percentage error in the *proportion* of males to females in the 1921 Census will be just over 1 per cent. If this is so, all the figures showing the number of females per 1,000 males will have a standard error of about eight or nine. These possibilities must

be borne in mind when comparing the proportions of the sexes at different censuses and in different localities. For example, the number of females per 1,000 males in 1911 was 817, as against 826 in 1921, the difference in these figures being less than the standard error of their difference on the above assumptions, it would be somewhat unsafe to deduce that there has been a real increase in the number of females per 1,000 males during the last decade. The same reasoning would apply in comparing, say, the proportion of females per 1,000 males in Jullundur (807) with that of the adjoining State of Kapurthala (816), it being possible that the observed differences are due solely to errors in enumeration, and not to any fundamental change in racial or economic causes. On the other hand, a difference of 25 in the number of females per 1,000 males in one locality and in another, or in one and the same locality at different epochs, would be double the standard error of the difference and should, therefore, be regarded as of probable significance. Thus, for example, Kangra (946), the Simla Hill States (917), Mandi State (944), and Dujana (908) have almost certainly a greater proportion of females than the Kalsia State (761), Ambala (766), Lahore (751), and Malerkotla (711). Again, in comparing the proportion of females at the 1901 Census with that of 1921 it is probable that the drop in the number of females per 1,000 males from 854 to 826 is a real one.

In comparing the proportion of females per 1,000 males of one religion with another, or of one caste with another caste belonging to the same religion, we might, in certain cases, be rash to accept even a difference of 25 *per mille* as proof of a genuine difference between the proportions of the sexes. On the other hand, in comparing the proportions of the sexes in different age-groups we are probably on fairly safe-ground for ages below 10 and above 30, but between those ages, which are the average marriageable limits for females, it is possible that the sex proportions differ considerably than those given by the returns. Discrepancies may arise from the largely prevailing custom of early marriage, and from the tendency, noted by Rai Bahadur Pandit Hari Kishen Kaul, for the reputed age of a girl to jump straight up to 20 years as soon as she is married. This would account for the great defect in females of ages 10 to 20 which is a feature of the returns for all religions during the last 3 censuses. The point will be further commented on in a subsequent paragraph.

Comparison with other provinces, places and censuses.

125. The proportion of females to 1,000 males for each of the last 5 censuses for various Provinces and States in India is given in the marginal table, and it will be seen that excluding the Andamans and the Delhi Province, which contain an abnormal number of males due to the great number of male convicts in the one case, and to immigration from cooly gangs in the other, the Punjab has the smallest recorded number of females per 1,000 males of any Indian Province or State, with the exception of Baluchistan (735). Without detailed analysis of the figures of other Provinces and States it will be unwise to believe that the whole of the differences between the proportions of the sexes in the Punjab and other Provinces of India is to be attributed to a real defect in the number of females in the former province. On the other hand, knowing the disregard for female life, except during the marriageable ages, which prevails in the Punjab, it should cause no surprise that females do not outnumber the males. In studying changes in

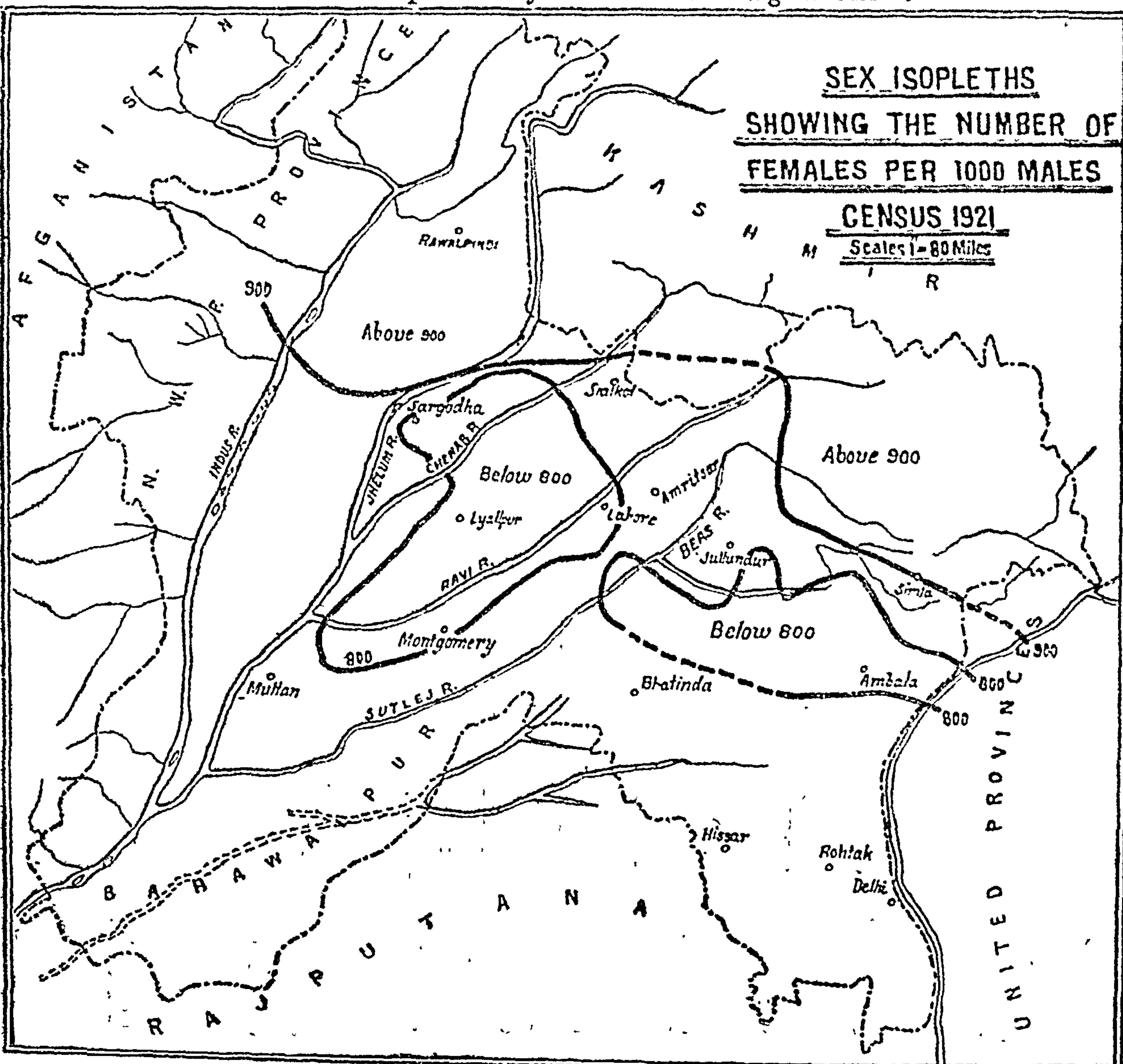
Province.	Proportion of females to 1,000 males.				
	1921.	1911.	1901.	1891.	1881.
Bihar and Orissa ..	1,029	1,043	1,047	1,040	1,024
Madras	1,023	1,028	978	1,024	1,014
Central Provinces and Bihar	1,002	1,008	1,019	985	973
Burma	955	959	963	959	877
Bengal	932	945	960	973	994
Bombay	919	933	945	938	938
United Provinces of Agra and Oudh	909	915	937	930	925
Rajputana Agency ..	899	909	905	891	848
Kashmir State	890	886	884	880	..
North-West Frontier Province	848	865	833	843	819
Punjab	828	817	854	850	844
Coorg	831	799	801	804	775
Baluchistan	735	788	820	..	..
Andaman and Nicobar ..	302	352	319	167	157
Ajmer Merwara	837	884	900	881	851
Assam	926	940	949	942	953
Delhi	733	944	862	861	896
Baroda State	932	925	936	928	917
Central India Agency ..	954	974	973	913	896
Gwalior State	880	903	906	..	..
Hyderabad State.. ..	966	968	964	964	968
Mysore State	962	979	981	991	1,006
Sikkim State	961	951	916	934	..

the number of females *per mille* in the Punjab during the last 40 years, an apparent increase in the number of females is observable from 1881 to 1901: between 1901 and 1911 there was a marked drop from 854 to 817 females per 1,000 males, and between 1911 and 1921 there has been again a rise to 828 *per mille*. That the drop in 1911 and the subsequent rise in 1921 are, at any rate, partially real is indicated by the great female mortality (1,000 females or over per 1,000 males) which obtained during the years 1902 to 1905 inclusive. Since 1891, only in those 4 years and in 1918, the year of the Influenza epidemic, were there more female than male deaths. An exact study of the proportion of female to male births and deaths, and their bearing on the census figures of the proportion of females to males, cannot be undertaken here.

The proportion of females to males for each of the last 5 censuses by natural divisions is given in the marginal table. The only observable systematic variation in the figures is that shown by the number of females in the Himalayan Area, which has steadily increased from 878 *per mille* in 1881 to 907 in 1921. This tract appears to tend to draw away gradually from the rest of the province.

Natural Divisions.	1921.	1911.	1901.	1891.	1881.
Indo-Gangetic Plain West ..	805	795	812	839	836
Himalayan	907	901	892	890	878
Sub-Himalayan	852	827	860	863	856
North-West Dry Area ..	827	825	838	847	835
Delhi	733	..	..	..	..

At this stage we may at once compare the proportion of females per 1,000 males for the whole of the province by reference to the diagram below :—



This diagram shows very clearly the feature referred to above namely the high proportion of females in the Himalayan tract. The lowest number of recorded females per 1,000 males occurs in two large areas (which in reality may be only one) stretching across the centre of the Punjab. The general features of the isopleths are explicable as a crater-like area with a central depression, containing a low proportion of women, in the colony areas, and in that part of the Punjab in which Sikhs predominate, and where, at any rate, till recently, female infanticide prevailed*. No finer gradation of the number of females per 1,000 males than by giving the isopleths for 800 and 900 females per 1,000 males, respectively, is attempted, as the previously noted possibilities of error are confirmed by the irregularities of the detailed isopleths.

The effect of immigration and emigration on the proportion of the sexes has already been noted, and the details are given in the table below. Of the total

		1921.				1911.			
		Males.	Females.	Total.	Proportion of females to 1,000 males.	Males.	Females.	Total.	Proportion of females to 1,000 males.
Actual Population.	Total Punjab and Delhi ..	14,013,681	11,575,567	25,589,248	825	13,314,975	10,872,775	24,187,750	817
	Punjab ..	13,732,048	11,369,012	25,101,060	828				
	Delhi ..	281,633	206,555	488,188	733				
Deduct Immigrants.	Total Punjab and Delhi ..	423,341	389,566	812,907	920	352,039	308,180	660,219	875
	Punjab ..	319,399	307,738	627,137	963				
	Delhi ..	103,942	81,828	185,770	788				
Add Emigrants.	Total Punjab and Delhi ..	372,494	246,090	618,584	661	314,789	201,823	516,612	641
	Punjab ..	342,396	206,990	549,386	605				
	Delhi ..	30,098	39,100	69,198	1,299				
Natural Population.	Total Punjab and Delhi ..	13,962,834	11,432,091	25,394,925	812	13,277,725	10,766,418	24,044,143	811
	Punjab ..	13,755,045	11,268,264	25,023,309	812				
	Delhi ..	207,789	163,827	371,616	788				

of 812,907 persons enumerated in the Punjab and Delhi in 1921, but born outside these Provinces, 423,341 were males and 389,566 were females, being a proportion of 920 females per 1,000 males. Of persons born in the Punjab and Delhi and enumerated outside the proportion of females is only 661 per 1,000, the actual numbers being 372,494 males and 246,090 females. The Punjab, therefore, draws to itself more females than it parts with: the effect is not surprising in view of the probable shortage of females in this part of India. The proportion of females according to religious groups is given in the marginal table, which shows that the proportion of females to 1,000 males descends from the Jain (853), Musalman (843), Hindu (825), Christian (782) and Sikh (764). The only steady variation exhibited by any other of the figures by religion is that exhibited by Christians which has risen from 465 females *per mille* of males in 1891, to 782 in 1921. This increase must be attributed to conversions from the ranks of low caste Indians, the initially low proportion being due solely to the fewness of female Europeans, who were, not so long ago, the only representatives of the Christian community in the Punjab.

Religion.	Actual.				
	1921.	1911.	1901.	1891.	1881.
All Religions	826	817	854	850	844
Jain	853	850	853	872	..
Musalman	843	833	878	871	..
Hindu	825	820	845	843	..
Sikh	764	746	779	784	..
Christian	782	707	580	465	..

*I do not wish it to be inferred from this that I have any evidence that female infanticide does not still exist in the Central Punjab, but only that I have been out of touch with the local conditions since 1916, and am, therefore, unable to say for certain whether female infanticide still prevails or not. A sudden change in a very established practice of this kind seems unlikely.

Statistically there is very strong evidence for the prevalence of female infanticide in 1921 from the kink in the sex isopleths for 800 females per 1,000 males in the south of the Jullundur district, which is more notorious than any other part of the Punjab for indulgence in this practice.

Proportion of females to males in different castes.

126. The detailed figures for all ages, as well as for the quinquennial age-groups up to 40 years of age, are given in Subsidiary Table IV to this chapter. Among Hindus the castes with a high proportion of females are the Ghirath (955), Dagi or Koli (946), both these castes being of low social position, and, therefore, not predisposed to conceal the existence of females; and Kanets (936): while the Hindu castes with a low proportion of females are the Rajput (796), Ahir (794), Jat (789), Chhimba (780), Gujjar (778) and Sansi (720). Among the castes of the latter group, that is, those containing proportionally few females, the Rajput is notorious for his practice of female infanticide; while, of the others the Sansi is a criminal tribe, and the Gujjar, though it numbers a large proportion of agriculturists, is also a caste with a somewhat unsavoury local reputation.*

Among the Sikhs, Khatris alone (917) have a large proportion of females per 1,000 males, while Tarkhans (795), Nais (769) and Jats (726) have the lowest proportion of females. Female infanticide probably accounts for the low proportion of females among Jat Sikhs, but there is no particular evidence of the existence of this custom among Sikh barbers and carpenters. Among Musalmans, the highest proportion of females is found among the Khojas (975), and they are followed by the Maliar (923), Awan (907) and Qassab (904). The two lowest castes are Sheikh (780) and Harni (725) : all the other Musalman castes except those mentioned have between 800 and 900 females per 1,000 males. The Harni, like his Hindu *confrere* the Sansi, belongs to a criminal tribe, and the fewness of the number of females among them may be attributed to this cause; but it seems probable that the lowness of the number of females among Sheikhs results from the concealment of the existence of their womenfolk.

The marginal table contrasts the position of certain leading castes in relation to the proportion of females for 1911 and 1921. In 1911 the Pathan had the fewest number of females per 1,000 males, and was followed by the Sheikh, Brahman, Khatri and Rajput in the order named. In 1921 the Sheikh, as already noted, had the fewest number of females, and was followed in order by the Brahman, Khatri, Pathan and Aggarwal. This change in the relative order of the proportion of females in different castes indicates that physiological causes are probably more potent than social custom, and that it would be rash to associate too closely variations in sex proportions with variation in tribal characteristics. This latter point is very clearly brought out if we correlate the number of females per 1,000 males for each caste as given for 1911, with the corresponding figures for 1921. 57 castes have been so correlated and the co-efficient of correlation is found to be 0·67. Though this is a high correlation, it is very far indeed from being perfect, and shows that during the 10 years elapsing between 1911 and 1921 there has been a very marked change in many castes in the proportion of females to males. Only if we were to correlate the proportion of females per 1,000 males at a considerable interval, say, 100 years, would it be possible to assert that the sex ratio was a tribal characteristic. It is worth recording that the co-efficients of variation of the numbers of females per 1,000 males from caste to caste were almost identical in 1911 and 1921; being 5·68 per cent. for the latter census and 5·72 for the former.

Caste.	1921.	1911.
Pathan	827	757
Sheikh	780	807
Brahman	821	809
Khatri	825	814
Rajput	845	819
Biloch	835	838
Mughal	880	841
Aggarwal	834	851
Sayad	875	875
Qureshi	884	896

Proportion of females to males in the different age-groups.

127. We have already seen in paragraph 115 of Chapter V how unreliable are the figures for the age-returns, and in comparing, therefore, the proportion of females to males for the different age-groups we might not unnaturally expect the results to be confusing and inconsistent *inter se*. In the Punjab we cannot even fall back on a scientifically constructed life-table of males and females for the purposes of comparison, as Mr. Acland, who dealt actuarially with the figures for 1911 and constructed a life-table for males, found the figures for female ages too unreliable to graduate. It has been necessary therefore to compare the crude figures of the number of males and females in each age-group, and it

* There is a Punjabi saying that *Kutta aur billi ek, rangar aur gujjar do*, which, being interpreted, puts these two castes on the level of cat and dog.

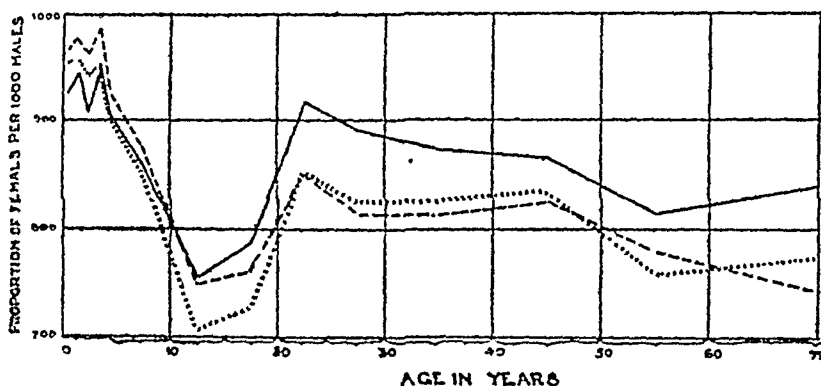
is surprising to find that the results for different religions and for different censuses are so accordant. The results are exhibited graphically in the diagrams which follow, and it will be observed that the curve showing the relative numbers of females to males follows similar courses for different religions, and for the same religion at different censuses. The observed correspondence may be due to a reality underlying the phenomena, or it may be spurious. In the latter case the agreement between the sex-age-distributions at different censuses would be explicable by reference to the constancy of the habit of misstatement, which must obtain in any large and conservative population. The correspondence between the curves for Hindus, Musalmans and Sikhs may likewise be a specious correspondence, and arise from the essential homogeneity of the Punjabi population in respect of such traits as the inaccurate statement of ages. For example, in many branches of conduct and in his attitude towards social and economic problems, the Jat Sikh of the Central Punjab resembles the Arain who lives in his own village much more nearly than the latter does a Musalman Arain living in the United Provinces. Nevertheless, it seems improbable that the whole of the correspondence between the different curves showing the proportion of females to males for different ages can be put down to a mere tendency to minimise or exaggerate ages, or to conceal the existence of females of marriageable ages, which is common to all religions in the Punjab. There is a possibility, therefore, of a smaller proportion of females to males between the ages of 10 and 20

than there is at any other ages. Diagrams 38, 39 and 40 may now be referred to.

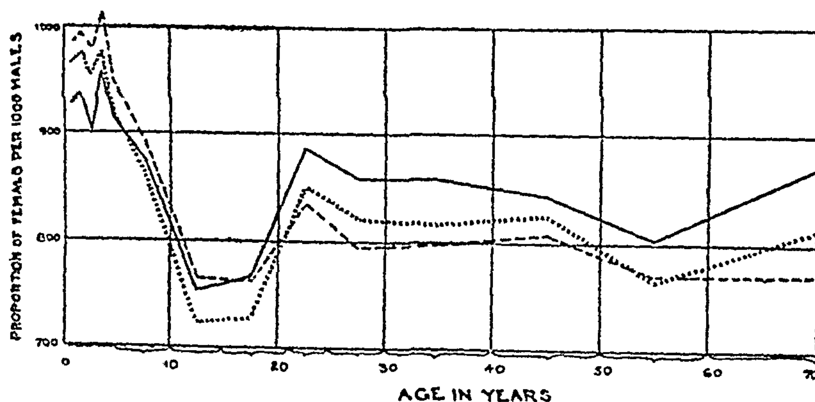
Diagram 38. PROPORTION OF FEMALES PER 1000 MALES ACCORDING TO AGE GROUPS BY RELIGIONS FOR PUNJAB & DELHI AT CENSUSES OF 1901, 1911, 1921 (VIDE SUBSIDIARY TAB. II CHAP. VI)

1901 ———
1911 ×××××
1921 - - - -

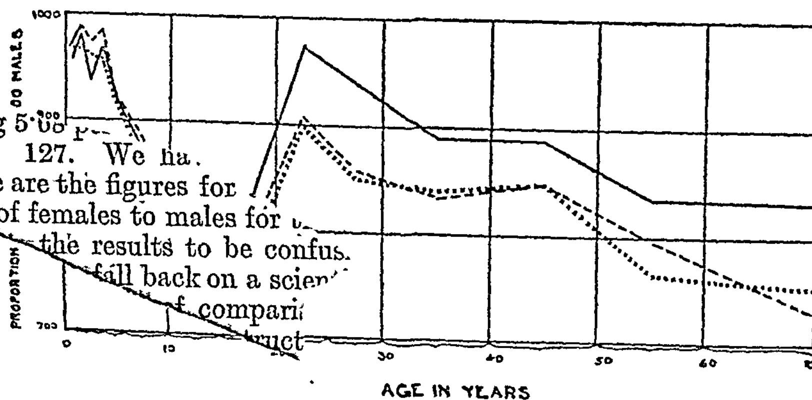
FOR ALL RELIGIONS



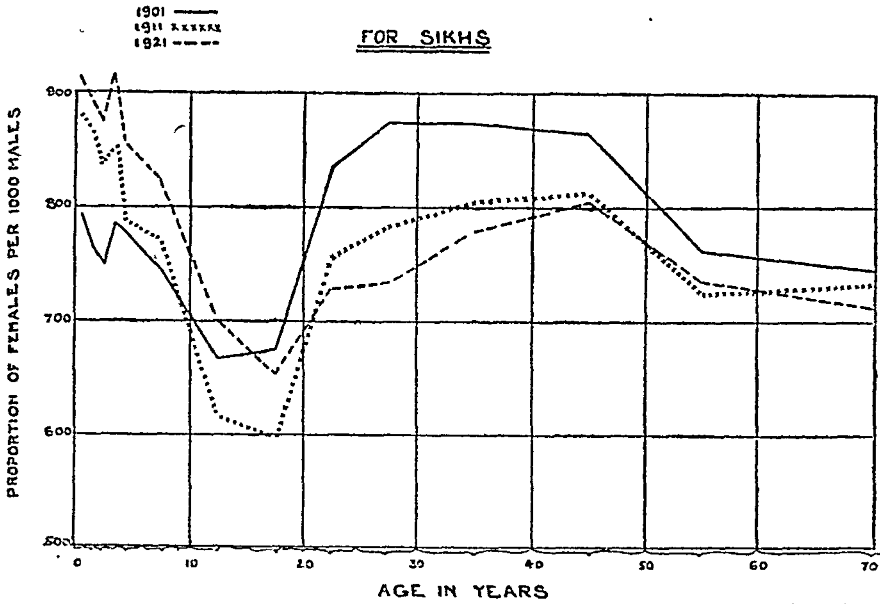
FOR HINDUS

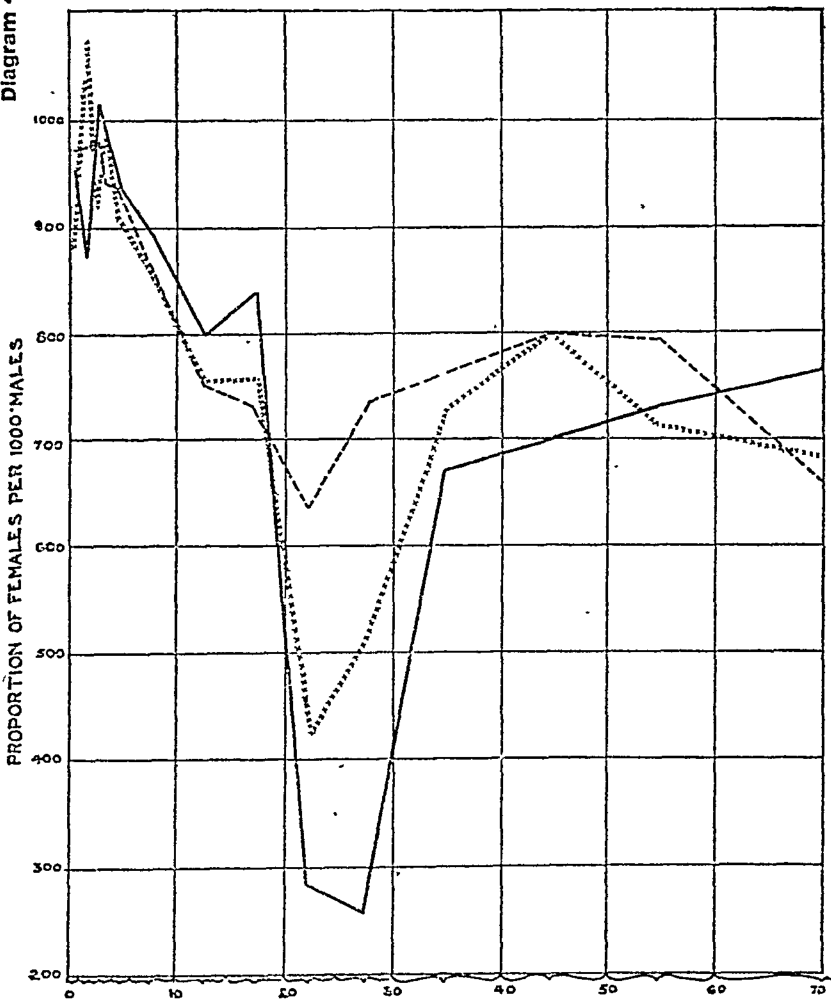


FOR MOHAMMADANS



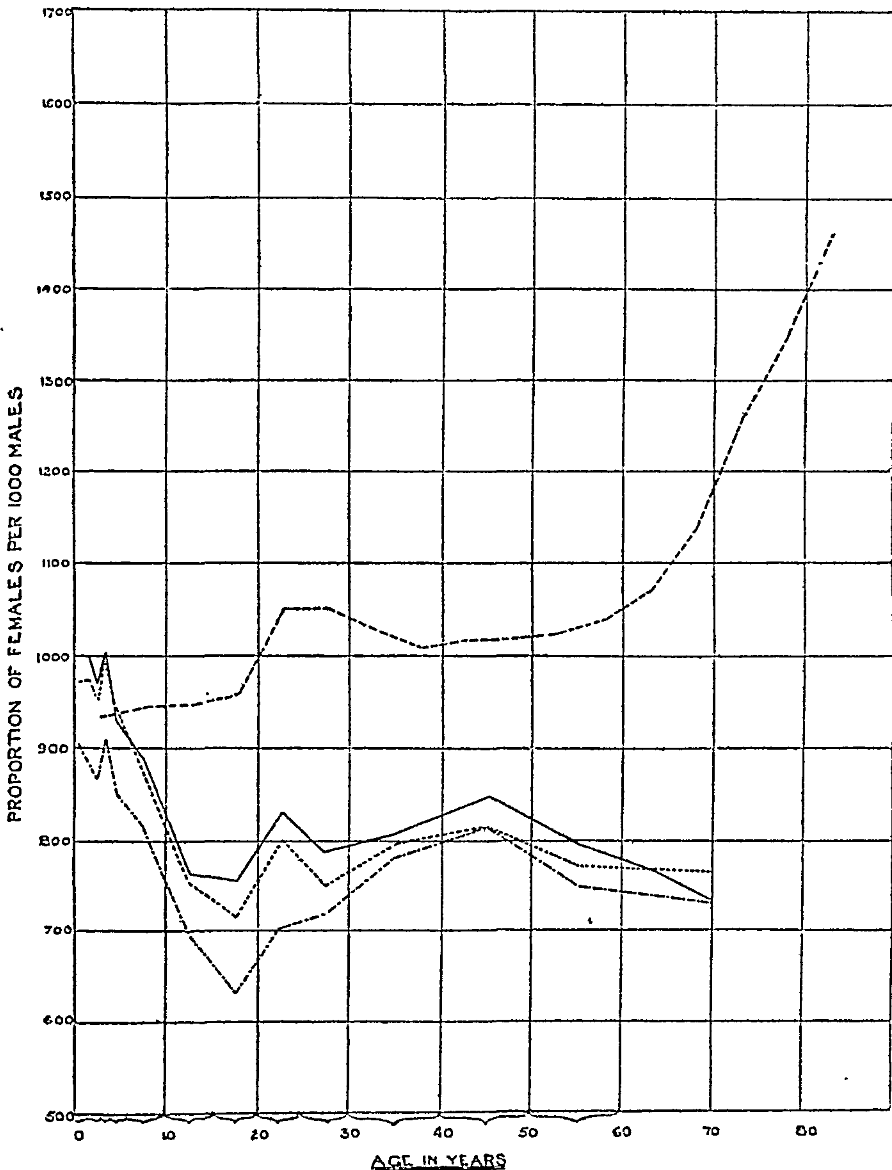
THE CURLY BRACKETS INDICATE THE AGE GROUPS AT THE CENTRE OF WHICH THE FREQUENCY IS CONCENTRATED


Diagram 39
PROPORTION OF FEMALES PER 1000 MALES
ACCORDING TO AGE GROUPS BY RELIGIONS FOR PUNJB & DELHI
AT CENSUSES OF 1901, 1911, 1921 (VIDE SUBSIDIARY TAB, II CHAP, VI)
1901
1911 xxxxxx
1921
FOR SIKHS
PROPORTION OF FEMALES PER 1000 MALES
900
800
700
600
500
0
10
20
30
40
50
60
70
AGE IN YEARS


1901
1911 xxxxx
1921
FOR CHRISTIANS
Diagram 40.
PROPORTION OF FEMALES PER 1000 MALES
1000
900
800
700
600
500
400
300
200
0
10
20
30
40
50
60
70
AGE IN YEARS
THE CURLY BRACKETS INDICATE THE AGE GROUPS AT THE CENTRE OF WHICH THE FREQUENCY IS CONCENTRATED

These give the number of females per 1,000 males for all religions, and for Hindus, Musalmans, Sikhs and Christians separately for the 3 censuses, 1901, 1911 and 1921, and display that remarkable similarity of feature which has been already referred to. In comparing the figures for the different censuses for Hindus, Musalmans and Sikhs, the great deficiency in the number of females in the marriageable ages from 10 to 20 is most striking. The deficiency was greatest in 1911 when the curve dropped far below its 1901 position. In 1921 the curves had moved part of the way towards their position in 1901, but are still somewhat below it. For Christians the greatest defect is in the number of females between the ages of 20—30, a fact which must be attributed to the later age of marriage among Christians as compared with the people of other religions. For Christians, however, the fewest number of females of marriageable age was found in 1901, and the number has risen steadily since then up to the present time. If the proselytisation of low caste Hindus, Musalmans and Sikhs continues it seems certain that the distribution curve for Christians will approximate more and more closely to the features of the curves of those religions. More particularly, this result is likely to be accelerated by the increasing tendency to defer the age of marriage among Punjabis of all non-Christian religious groups. This feature is well marked in the diagrams, there being a perceptible tendency for the minimum number of females per 1,000 males to leave the group 10—15 years for the group 15—20 years. In the case of Hindus, the minimum has actually shifted to the 15—20 group in 1921, probably for the first time in recent history, while for Sikhs the shift took place between 1901 and 1911. For Christians the reverse process is at work and the minimum has shifted backward from the age-group 35—30 years in 1901, to the age-group of 20—25 years in 1911: and there it still remains. It may be interesting to suppose, just for a moment, that the figures of the relative numbers of males and females for each age-group really correspond with the facts, and to attempt to explain the variations of the relative frequency of females to males for each age-group. More males are born than females, roughly in the proportion of 10 males to 9 females. Among Musalmans and Hindus a greater mortality appears to occur among boy children than among girl children during the first five years of life, and up to the age of 4 the proportion of females is well maintained if not actually increased. From the age of 5 to 15 years the drop in the proportion of females is very marked, and this may be due to the neglect of female children during the years preceding puberty. From the age of 15—25 years the female is in demand, and will have more attention paid to her, so that during those years the proportion of females rapidly increases. There is a drop in the curves for Musalmans and Hindus towards the ages of 25—30, and this may be attributed to the mortality arising from early child-bearing. After the age of 30 the proportion of females rises to another maximum between the ages of 40 and 50 which corresponds to the close of the usual span of female fertility. Thereafter the curve drops away towards the high ages, women of over the age of 50, especially among the poorer classes, suffering considerably from neglect, if not from actual privation.

It is instructive to compare the figures with the corresponding figures for the proportion of females to males in Engalnd and Wales according to the Census of 1911. The results are exhibited in diagram 41 below :—



The explanations offered for the variations in the curves for Musalmans, Hindus and Sikhs in the Punjab may apply to the peak in the English curve which occurs between the ages of 20 and 30, and to the slight subsequent drop between the ages of 30 and 40. That is to say, that at the marriageable ages of 20 to 30 females have much greater care and attention bestowed upon them than males of the corresponding ages, but that the mortality of child-bearing produces a

slight re-action after the age of about 27 years in favour of males. Most marked of all, however, is the fact that apart from this particular phenomenon associated with marriage, the proportion of females to males in England and Wales rises continuously from childhood to old age, indicative of the excessive care lavished on women in England *quâ* women, and not merely *quâ* child-bearers. Social reformers may well stand aghast at the neglect of, and the contempt for female life shown by all religious groups in the Punjab ; but no less extensive, and, possibly, fraught with serious consequences to the future of the race, is the excessive pampering of females in England, and its correlative the undue neglect of male life.*

*In discussing the matter with Colonel Forster, I.M.S., Director of Public Health, Punjab, he has made the following acute observations which bear on the great disproportion among females and males at the higher ages in England. During the past half century there has been a steady tendency for females to acquire property and sums of money in their own right. Now, whereas, a man has, through the force of traditional and social custom, a tendency to spend his money for the benefit of the woman, the woman has no traditional tendency to spend her money for the benefit of the man. The consequence is that, in enjoying the benefits of little comforts and luxuries, woman in England is steadily increasing her advantages over the man, and the effect of this process on the relative male and female mortality can hardly be negligible. In the Punjab the independent woman, *e.g.*, the orphan daughter or widow, has, under customary law, only the right of maintenance, and she may never alienate the ancestral property except for necessity, the onus of proving which is put upon her.

I. General proportion of the sexes by Natural Divisions, Districts and States. II. Number of females per 1,000 males at different age-periods by religions at each of the last three censuses, Punjab and Delhi. III. Number of females per 1,000 males at different age-periods by religions and natural divisions (Census of 1921), Punjab and Delhi. IV. Number of females per 1,000 males for certain selected cities, Punjab and Delhi V. Actual Number of Births and Deaths reported for each sex during decades 1891—1900, 1901—1910 and 1911—1920 (for British Territory only). VI. Number of deaths of each sex at different ages. VII. Proportion of females per 1,000 males (By Tahsils), Census 1921.

SUBSIDIARY TABLE I.

General proportion of the sexes by Natural Divisions, Districts and States.

District or State and Natural Division.	Number of Females to 1,000 Males.									
	1921.		1911.		1901.		1891.		1881.	
	Actual Population.	Natural Population.	Actual Population.	Natural Population.	Actual Population.	Natural Population.	Actual Population.	Natural Population.	Actual Population.	Natural Population.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB AND DELHI	826	819	817	811	854	846	850	844	844	844
PUNJAB	828	819	..	..	..	..	..	..	..	..
INDO-GANGETIC PLAIN WEST (TOTAL)..	802	795	795	787	842	829	839	825	836	828
INDO-GANGETIC PLAIN WEST (PUNJAB)	805	795	..	..	..	..	..	..	..	..
1. Hissar	875	855	836	840	870	860	870	860	843	935
2. *Loharu State*	882	1,154	863	909	866	925	829	852	824	838
3. Rohtak	850	811	859	816	893	858	884	844	869	832
4. *Dujana State*	908	810	904	787	937	897	921	863	870	773
5. Gurgaon	854	806	878	846	911	868	910	810	894	875
6. *Pataudi State*	893	712	925	722	905	750	909	761	877	690
7. Karnal	827	814	827	814	844	814	843	825	852	826
8. Jullundur	807	767	783	743	847	802	841	810	830	819
9. *Kapurthala State*	816	768	785	746	851	860	834	823	822	767
10. Ludhiana	780	748	762	724	823	786	830	805	822	815
11. *Malerkotla State*	711	752	752	757	849	836	859	867	843	845
12. Ferozepore	801	820	782	791	827	815	826	833	822	829
13. *Faridkot State*	789	756	765	772	802	785	800	796	802	763
14. *Patiala State*	791	787	776	780	820	846	817	826	818	810
15. *Jind State*	816	819	812	825	839	838	825	862	825	865
16. *Nabha State*	792	780	786	786	802	818	815	809	804	791
17. Lahore	751	701	741	775	815	823	816	821	811	796
18. Amritsar	790	765	774	759	829	799	828	803	820	803
19. Gujranwala	788	794	782	781	846	834	821	842	849	834
20. Sheikhupura	783	793	..	..	..	..	..	..	..	..
HIMALAYAN	907	912	901	906	892	913	890	909	878	900
21. *Nahan State*	824	846	822	849	798	845	792	836	775	800
22. Simla	488	606	591	923	542	1,025	589	883	556	1,000
23. *Simla Hill States*	917	960	907	917	888	911	876	900	850	867
24. *Bilaspur State*	874	877								
25. Kangra	946	919	921	897	925	915	922	913	919	921
26. *Mandi State*	944	958	933	942	915	936	933	950	945	920
27. *Suket State*	897	923	893	901	888	889	887	920	793	861
28. *Chamba State*	911	916	924	927	923	924	921	927	917	930
SUB-HIMALAYAN	852	834	827	810	880	862	863	855	856	863
29. Ambala	776	773	750	755	807	814	821	826	814	853
30. *Kalsia State*	761	695	786	704	817	738	824	748	835	630
31. Hoshiarpur	860	822	832	806	882	850	873	864	872	864
32. Gurdaspur	811	802	783	776	844	843	838	839	848	845
33. Sialkot	837	814	807	782	891	854	871	852	876	853
34. Gujrat	879	858	861	843	927	897	900	846	903	876
35. Jhelum	976	895	904	855	979	911	918	888	880	897
36. Rawalpindi	827	873	848	866	819	900	854	894	826	892
37. Attock	934	920	902	879	Not available.					
NORTH-WEST DRY AREA ..	827	841	825	847	838	859	847	855	835	843
38. Montgomery	815	849	828	848	862	850	853	851	831	832
39. Shahpur	836	826	824	869	919	899	912	903	901	892
40. Mianwali..	885	890	898	877	895	Not available.				
41. Lyallpur	792	850	761	860	745	506	Not available.			
42. Jhang	868	862	860	846	889	852	870	849	844	826
43. Multan	824	840	832	846	829	854	819	850	813	846
44. *Bahawalpur State*	816	827	814	829	822	833	830	815	824	834
45. Muzaffargarh	842	839	847	842	842	848	842	854	835	842
46. Dera Ghazi Khan	819	809	831	832	835	838	817	837	811	828
DELHI	733	788	..	..	..	..	..	..	..	..
INDO-GANGETIC PLAIN WEST ..	733	788	..	..	..	..	..	..	..	..
1. Delhi	733	788	..	..	..	..	..	..	..	..

NOTE 1. District and divisional figures in column 9 include the emigrants to other provinces except N.-W. Frontier.
2. Figures for Punjab and Delhi in column 9 include emigrants from N.-W. Frontier to other provinces of India except Punjab.

SUBSIDIARY TABLE II.

Number of females per 1,000 males at different age-periods by religions at each of the last three Censuses, Punjab and Delhi.

Age.	All Religions.			Hindu.			Musalman.			Christian.			Jain.			Sikh.		
	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.	1901.	1911.	1921.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Under 1	927	954	966	928	966	982	950	963	968	948	871	966	930	1,059	864	792	884	915
1	945	959	977	938	975	993	978	969	989	865	1,074	969	893	898	1,031	764	867	804
2	908	941	962	902	951	977	938	959	972	1,012	905	978	888	1,082	1,059	747	832	874
3	948	952	986	956	977	1,013	966	956	984	986	987	932	941	973	1,103	785	858	916
4	908	903	928	911	914	953	926	923	928	936	905	932	957	888	932	776	784	855
Total 0—4 inclusive ..	926	941	963	926	956	983	949	953	966	952	933	954	925	994	980	774	848	893
5—9 " ..	861	851	874	874	864	892	869	859	874	893	860	868	876	896	919	741	769	821
10—14 " ..	755	707	750	754	723	763	771	717	754	795	750	746	825	776	796	665	612	700
15—19 " ..	787	729	763	768	727	762	829	768	794	838	753	726	814	791	863	674	596	651
20—24 " ..	917	854	852	887	851	837	972	898	905	280	410	632	884	888	846	836	754	729
25—29 " ..	892	826	815	859	820	792	934	850	856	254	514	732	832	796	810	873	782	732
Total 0—29 " ..	853	822	843	844	826	846	882	844	861	540	695	793	861	858	874	751	729	764
30—39 " ..	874	826	813	858	817	798	889	840	833	668	725	760	815	797	829	873	802	779
40—49 " ..	865	834	826	842	825	806	887	847	847	700	799	797	810	840	821	865	812	807
50—59 " ..	814	759	778	803	764	767	836	765	797	731	716	792	825	838	760	762	726	737
60 and over ..	840	772	742	873	814	770	833	755	732	762	687	665	1,000	958	835	749	734	715
Total 30 and over ..	855	807	796	846	809	780	870	814	810	695	738	757	838	837	814	825	777	764
Total all ages. Actual Population	854	817	826	845	820	825	878	833	843	580	707	782	853	850	853	779	746	764
Total all ages. Natural Population.	846	811	819	Not available.	816	..	Not available.	835	..	Not available.	806	..	Not available.	839	..	Not available.	738	..

1921.

Age.	All Religions.		Hindu.		Musalman.		Christian.		Jain.		Sikh.	
	Punjab.	Delhi.	Punjab.	Delhi.	Punjab.	Delhi.	Punjab.	Delhi.	Punjab.	Delhi.	Punjab.	Delhi.
1	2	3	4	5	6	7	8	9	10	11	12	13
Under 1	966	973	982	983	968	947	963	1,089	875	765	915	972
1	977	1,019	994	970	987	1,194	974	794	1,048	852	894	786
2	961	1,032	977	990	971	1,146	980	910	1,059	1,064	874	846
3	985	1,032	1,011	1,069	985	952	930	980	1,104	1,088	915	2,187
4	928	944	954	916	928	994	929	1,045	893	1,339	855	562
Total 0—4 inclusive ..	962	994	982	986	965	1,014	954	985	977	1,011	893	976
5—9 " ..	874	904	892	893	874	919	864	1,035	911	1,000	821	844
10—14 " ..	751	692	765	680	755	714	742	886	825	531	700	530
15—19 " ..	764	696	764	709	796	656	722	823	863	868	652	425
20—24 " ..	857	701	843	736	909	700	661	351	840	851	730	311
25—29 " ..	819	641	800	643	859	651	742	579	813	784	733	290
Total 0—29 " ..	844	773	849	776	862	782	798	678	878	838	764	465
30—39 " ..	817	639	806	628	835	672	765	657	838	756	779	264
40—49 " ..	830	649	812	654	850	643	802	678	837	704	807	330
50—59 " ..	779	701	768	725	799	649	792	791	769	690	738	338
60 and over ..	742	740	770	774	732	670	663	779	844	759	715	437
Total 30 and over ..	799	665	794	669	812	659	760	690	825	727	765	301
Total all ages. Actual Population ..	828	733	829	737	844	736	786	682	860	794	765	406
Total all ages. Natural Population ..	819	788	..	..	..	..	..	..	..	..	..	..

SUBSIDIARY TABLE III.

Number of females per 1,000 males at different age-periods by religious and natural divisions (Census of 1921)—PUNJAB.

Age.	Indo-Gangetic Plain West.						Himalayan.					
	All Religions.	Hindu.	Musalman.	Christian.	Jain.	Sikh.	All Religions.	Hindu.	Musalman.	Christian.	Jain.	Sikh.
1	2	3	4	5	6	7	8	9	10	11	12	13
Under 1	960	974	971	954	891	909	1,009	1,010	1,002	773	1,000	922
1	975	989	1,006	955	1,033	886	1,011	1,012	955	1,864	500	1,182
2	946	954	974	937	1,116	865	1,071	1,077	950	771	3,000	1,150
3	988	1,000	1,011	913	1,108	910	1,055	1,056	1,032	1,087	3,000	1,033
4	922	943	933	905	965	849	1,039	1,035	1,071	1,750	500	1,304
Total 0—4 inclusive ..	957	971	976	933	1,007	886	1,038	1,039	1,006	1,086	1,143	1,098
5—9 " ..	868	876	889	849	916	809	963	964	928	1,498	1,778	951
10—14 " ..	742	750	760	697	814	693	828	828	813	1,658	524	690
15—19 " ..	709	709	753	740	885	625	955	963	793	1,579	833	699
20—24 " ..	789	797	828	735	848	699	1,021	1,042	743	839	400	690
25—29 " ..	757	749	787	783	809	712	972	995	638	893	560	615
Total 0—29 " ..	815	821	843	802	886	747	958	965	826	1,237	705	786
30—39 " ..	795	792	804	825	872	779	871	887	614	895	690	542
40—49 " ..	820	805	843	801	874	809	846	857	631	834	214	587
50—59 " ..	772	767	794	772	776	745	778	784	619	1,097	780	510
60 and over ..	738	758	729	679	865	725	803	787	523	1,375	632	613
Total 30 and over ..	787	785	798	783	853	769	834	840	601	941	558	560
TOTAL ALL AGES. Actual Population	805	808	827	796	874	755	907	913	737	1,111	641	694
TOTAL ALL AGES. Natural Population	795	..	..	..	..	..	912	..	..	..	..	..

Age.	Sub-Himalayan.						North West Dry Area.					
	All Religions.	Hindu.	Musalman.	Christian.	Jain.	Sikh.	All Religions.	Hindu.	Musalman.	Christian.	Jain.	Sikh.
1	14	15	16	17	18	19	20	21	22	23	24	25
Under 1 ..	971	974	977	927	737	933	964	1,001	959	1,041	2,000	927
1	977	980	988	957	1,286	906	972	1,013	969	1,008	400	915
2	962	948	979	1,026	779	879	963	989	962	1,006	1,833	908
3	989	1,002	·991	971	1,071	938	960	1,017	956	901	714	907
4	927	923	937	931	672	868	916	942	915	950	385	865
Total 0—4 inclusive ..	964	965	973	957	837	908	953	991	950	983	974	906
5—9 " ..	880	883	883	881	889	844	858	884	855	846	761	854
10—14 " ..	767	766	775	772	889	717	734	747	733	744	875	717
15—19 " ..	808	766	845	689	805	735	784	720	805	702	425	698
20—24 " ..	898	827	979	488	893	793	918	812	947	882	697	849
25—29 " ..	875	799	933	727	834	785	851	747	880	672	1,000	793
Total 0—29 " ..	867	842	892	768	861	803	851	829	859	823	775	810
30—39 " ..	855	793	898	740	729	793	806	745	822	677	538	766
40—49 " ..	867	813	901	829	726	828	808	758	822	757	690	763
50—59 " ..	814	770	848	818	744	745	758	735	768	769	692	671
60 and over ..	750	782	762	657	783	697	717	763	714	623	714	686
Total 30 and over ..	828	792	860	758	739	771	782	750	792	702	628	732
TOTAL ALL AGES. Actual Population	853	823	880	765	815	791	827	801	835	786	723	784
TOTAL ALL AGES. Natural Population	834	..	..	..	..	..	841	..	..	..	..	..

SUBSIDIARY TABLE III.

Number of females per 1,000 males at different age-periods by religions and natural divisions (Census of 1921).

DELHI.

Age.	Indo-Gangetic Plain West.					
	All Religions.	Hindu.	Musalman.	Christian.	Jain.	Sikh.
1	2	3	4	5	6	7
Under 1	973	983	947	1,089	765	972
1	1,019	970	1,194	794	862	786
2	1,032	990	1,146	910	1,064	846
3	1,032	1,069	952	980	1,088	2,187
4	944	916	944	1,045	1,339	562
Total 0—4 inclusive	994	986	1,014	985	1,011	976
5—9 "	904	893	919	1,035	1,000	844
10—14 "	692	680	714	886	531	530
15—19 "	696	709	656	823	868	425
20—24 "	701	736	700	351	851	311
25—29 "	641	643	651	579	784	290
Total 0—29 "	773	776	782	678	838	465
30—39 "	639	628	672	657	756	264
40—49 "	649	654	643	678	704	330
50—59 "	701	725	649	791	690	338
60 and over	740	774	670	779	759	437
Total 30 and over	665	669	659	690	727	301
Total all ages. Actual Population	733	737	736	682	794	406
Total all ages. Natural Population	788	..	..	..	..	..

SUBSIDIARY TABLE IV—PUNJAB.

Number of females per 1,000 males for certain selected castes.

Castes.	Number of females per 1,000 males.						
	All ages.	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—19 (inclusive).	20—39 (inclusive).	40 and over.
1	2	3	4	5	6	7	8
HINDU.							
1. Arora	856	1,001	890	722	797	845	835
2. Aggarwal	834	949	897	746	745	793	836
3. Ahir	794	991	842	610	693	774	773
4. Brahman	821	977	907	703	742	791	798
5. Bawaria	875	967	868	693	845	983	755
6. Chamar	845	976	879	714	695	862	823
7. Churah	834	979	873	697	709	868	761
8. Chhimba	780	908	887	718	795	791	657
9. Dagi or Koli	946	1,043	926	856	614	1,034	1,024
10. Dhanak	886	1,005	885	863	881	921	760
11. Gujjar	778	902	753	708	699	783	785
12. Girth	955	1,145	899	861	1,022	1,051	795
13. Jat	789	922	829	720	699	774	759
14. Jhinwar	808	937	881	738	734	787	755
15. Julah	857	1,014	993	848	881	825	729
16. Khatri	811	1,041	871	727	693	730	844
17. Kanet	936	1,038	953	798	918	972	890
18. Kumhar	859	1,023	934	771	810	823	796
19. Lohar	838	999	884	726	850	837	758
20. Mali	812	1,013	861	762	756	786	731
21. Nai	802	915	867	692	757	777	774
22. Rajput	796	938	840	723	766	768	779
23. Sunar	824	967	828	750	780	816	794
24. Saini	865	1,120	930	703	674	863	842
25. Sansi	720	823	741	691	888	683	641
26. Tarkhan	817	985	867	761	759	792	760
SIKH.							
1. Arora	836	896	829	725	851	885	781
2. Chamar	819	931	888	699	720	827	760
3. Churah	815	960	863	779	666	819	743
4. Chhimba	813	975	878	749	794	792	740
5. Jat	726	862	757	638	592	703	743
6. Jhinwar	848	969	906	678	749	836	833
7. Kamboh	854	936	1,009	849	730	818	783
8. Khatri	917	966	912	825	936	970	866
9. Mahtam	894	1,016	927	830	811	948	744
10. Nai	769	908	841	718	625	721	775
11. Saini	826	931	826	618	512	900	938
12. Tarkhan	795	897	832	721	737	804	752
MUSALMAN.							
1. Arain	830	948	860	817	755	830	765
2. Awan	907	962	864	680	922	977	914
3. Biloch	835	929	805	702	754	902	795
4. Bharai	835	908	885	685	772	855	801
5. Birwala	848	1,032	859	820	741	832	798
6. Chhimba	853	988	874	743	801	846	810
7. Dhobi	868	923	891	854	816	892	800
8. Dogar	813	991	860	735	680	790	785
9. Faqir	819	1,020	865	704	803	802	738
10. Gujjar	838	941	885	753	793	849	778
11. Harni	725	1,025	680	617	551	798	617
12. Jat	820	942	815	713	788	849	768
13. Julah	845	961	881	770	790	859	771
14. Jhinwar	834	937	889	691	710	853	782
15. Kumhar	849	911	908	691	774	865	824
16. Kashmiri	871	942	865	762	795	865	905
17. Khoja	975	1,066	992	912	925	1,041	858
18. Kamboh	885	960	901	938	790	998	714
19. Khokhar	829	1,006	823	650	862	857	753
20. Lohar	853	950	835	774	783	892	815
21. Mochi	854	996	936	673	785	844	806
22. Musalli	859	981	894	798	823	883	745
23. Machhi	854	964	908	708	679	908	796
24. Mirasi	865	950	875	739	807	882	849
25. Meo	844	898	846	747	731	864	873
26. Mughal	889	904	869	832	932	925	856
27. Mahar	923	872	880	743	826	1,088	912
28. Mallah	842	846	877	747	862	922	736
29. Nai	850	1,017	847	758	800	852	801
30. Pathan	827	960	896	767	771	786	709
31. Pakhiwara	832	1,146	805	536	910	846	730
32. Qasab	904	1,039	865	913	837	919	859
33. Qureshi	884	935	844	803	898	933	851
34. Rajput	864	957	889	781	790	870	839
35. Sheikh	780	1,001	925	682	704	730	702
36. Sayad	875	964	887	764	855	897	838
37. Sunar	887	733	1,822	694	602	974	766
38. Tarkhan	835	947	830	697	799	876	782
39. Teli	841	955	850	720	737	850	832

SUBSIDIARY TABLE IV—DELHI.

Number of females per 1,000 males for certain selected castes.

Caste.	Number of females per 1,000 males.						
	All ages.	0—4 (inclusive).	5—11 (inclusive).	12—14 (inclusive).	15—19 (inclusive).	20—39 (inclusive).	40 and over.
1	2	3	4	5	6	7	8
HINDU.							
1. Aggarwal	732	875	819	572	851	679	705
2. Ahir	710	664	1,073	650	594	644	731
3. Brahman	666	928	866	522	685	514	767
4. Chamar	745	998	897	640	750	713	589
5. Churah	767	1,063	801	519	778	755	677
6. Dagi or Koli	646	1,000	1,058	508	618	540	573
7. Dhanak	562	760	764	355	405	545	544
8. Dhobi	760	968	793	614	508	758	848
9. Gujjar	737	968	476	1,117	697	755	707
10. Jat	803	1,124	830	670	590	749	861
11. Jhinwar	598	923	581	475	566	458	966
12. Julah	776	1,008	859	1,113	611	752	851
13. Kumhar	787	1,086	1,043	671	698	649	793
14. Khatri	741	1,243	1,060	589	797	594	715
15. Lohar	675	842	887	471	509	579	761
16. Mali	745	930	916	711	688	722	651
17. Nai	829	921	905	650	815	771	876
18. Rajput	584	984	727	507	656	492	513
19. Saini	922	1,232	965	714	897	895	816
20. Sunar	790	1,217	853	769	770	712	733
21. Sansi	714	444	864	3,667	800	712	487
22. Tarkhan	585	1,132	762	308	534	504	600
JAIN.							
1. Aggarwal	768	953	977	378	827	791	681
MUSALMAN.							
1. Arain	838	1,141	736	807	850	691	1.004
2. Dhobi	839	1,072	1,052	614	645	916	579
3. Faqir	921	1,172	969	761	216	1,044	929
4. Mughal	800	1,355	813	810	857	542	853
5. Meo	774	922	856	596	876	734	701
6. Machhi	468	667	943	74	455	596	385
7. Pathan	651	878	721	520	806	645	533
8. Qureshi	850	884	1,394	1,041	1,228	627	676
9. Rajput	604	1,196	832	351	828	499	461
10. Sheikh	752	1,009	1,047	688	582	706	642
11. Sayad	702	804	859	678	815	535	763
12. Teli	845	1,262	1,049	984	656	745	651

SUBSIDIARY TABLE V.

Actual number of Births and Deaths reported for each sex during decades 1891—1900, 1901—1910, and 1911—1920. (For British Territory only).

Year.	Number of Births.			Number of Deaths.			Difference between columns 2 and 3 excess of latter over former + defect.—	Difference between columns 5 and 6 excess of latter over former and defect.	Difference between columns 4 and 7 excess of latter over former and defect.	Number of female births per 1,000 male births.	Number of female deaths per 1,000 male births.
	Males.	Females.	Total.	Males.	Females.	Total.					
1	2	3	4	5	6	7	8	9	10	11	12
Punjab and Delhi (1891—1900) ..	4,048,998	3,668,763	7,717,761	3,342,579	3,067,397	6,409,976	—380,235	—275,182	+1,307,785	906	918
1891 ..	341,158	301,911	643,069	289,770	251,414	541,184	—39,247	—38,356	+101,885	885	868
1892 ..	380,672	338,240	718,912	475,422	432,814	908,236	—42,432	—42,608	—189,324	889	910
1893 ..	350,215	314,068	664,283	280,423	247,095	527,518	—36,147	—33,328	+136,765	897	881
1894 ..	433,731	391,359	825,090	363,881	332,545	696,426	—42,372	—31,336	+128,664	902	914
1895 ..	428,727	391,148	819,875	289,446	258,868	548,314	—37,579	—30,578	+271,561	912	894
1896 ..	420,759	385,258	806,017	305,698	276,591	582,289	—35,501	—29,107	+223,728	916	905
1897 ..	415,410	379,559	794,969	289,543	275,733	565,276	—35,851	—13,810	+229,693	914	952
1898 ..	403,231	367,488	770,719	296,188	278,620	574,808	—35,743	—17,568	+195,911	911	941
1899 ..	474,937	435,672	910,609	284,385	266,602	550,987	—39,265	—17,783	+359,622	917	937
1900 ..	400,158	364,060	764,218	467,823	447,115	914,938	—36,098	—20,708	—150,720	910	956
Punjab & Delhi (1901—1910) ..	4,340,338	3,945,923	8,286,261	4,459,990	4,383,718	8,843,708	—394,415	—76,272	—557,447	909	983
1901 ..	373,466	339,067	712,533	372,350	354,261	726,611	—34,399	—18,089	—14,078	908	951
1902 ..	461,952	418,525	880,477	443,473	443,500	886,973	—43,427	+27	—6,496	906	1,000
1903 ..	452,622	410,240	862,862	486,802	498,674	985,476	—42,382	+11,872	—122,614	906	1,024
1904 ..	436,678	397,371	834,049	480,250	506,208	986,458	—39,307	+25,958	—152,409	910	1,054
1905 ..	467,536	425,824	893,360	475,973	480,135	956,108	—41,712	+4,162	—62,748	911	1,009
1906 ..	459,329	418,677	878,006	374,880	368,026	742,906	—40,652	—6,854	+135,100	911	982
1907 ..	430,253	389,318	819,571	637,357	611,372	1,248,729	—40,935	—25,985	—429,158	905	959
1908 ..	439,539	400,522	840,061	517,219	502,906	1,020,125	—39,017	—14,313	—180,064	911	972
1909 ..	369,694	336,216	705,910	326,613	294,470	621,083	—33,478	—32,143	+84,827	909	902
1910 ..	449,269	410,163	859,432	345,073	324,166	669,239	—39,106	—20,907	+190,193	913	939
Punjab (1911—1920) ..	4,445,642	4,027,464	8,473,106	3,662,207	3,398,978	7,061,185	—418,178	—263,229	+1,411,921	906	928
1911 ..	443,322	405,004	848,326	334,246	315,014	649,260	—38,318	—19,232	+199,066	914	942
1912 ..	458,052	418,073	876,125	269,678	245,358	515,036	—39,979	—24,320	+361,089	913	910
1913 ..	459,417	418,824	878,241	304,326	279,458	583,784	—40,593	—24,868	+294,457	912	918
1914 ..	468,243	426,763	895,006	318,325	299,748	618,073	—41,480	—18,577	+276,933	911	941
1915 ..	440,955	402,057	843,012	359,821	342,729	702,550	—38,898	—17,092	+140,462	912	952
1916 ..	461,540	420,006	881,546	309,973	283,697	593,670	—41,534	—26,276	+287,876	910	915
1917 ..	459,273	417,460	876,733	378,785	354,324	733,109	—41,813	—24,461	+143,624	909	935
1918 ..	404,565	360,903	765,468	797,343	768,217	1,565,560	—43,662	—29,126	—800,092	892	963
1919 ..	413,018	365,828	778,846	291,266	256,804	548,070	—47,190	—34,462	+230,776	886	882
1920 ..	437,257	392,546	829,803	298,444	253,629	552,073	—44,711	—44,815	+277,730	898	850
Indo-Gangetic Plain West.	1,999,811	1,825,279	3,825,090	1,669,441	1,558,941	3,228,882	—174,532	—110,500	+596,708	913	934
Himalayan ..	148,438	138,766	287,204	136,714	130,608	267,322	—9,672	—6,106	+19,882	935	955
Sub-Hamalayan	1,241,903	1,133,364	2,375,267	1,060,280	988,527	2,048,807	—108,539	—71,753	+326,460	913	932
North-West Dry Area. ..	1,055,490	930,055	1,985,545	795,772	720,902	1,516,674	—125,435	—74,870	+468,871	881	906
Delhi (1911—1920). ..	101,000	94,390	195,390	91,859	90,709	182,568	—6,610	—1,150	+12,822	935	987
1911 ..	8,955	8,332	17,287	11,653	11,006	22,659	—623	—647	—5,372	930	944
1912 ..	10,100	9,438	19,538	9,186	9,068	18,254	—662	—118	+1,284	934	987
1913 ..	9,180	8,681	17,861	8,174	7,703	15,877	—499	—471	+1,984	946	942
1914 ..	9,880	9,507	19,387	7,661	7,418	15,079	—373	—243	+4,308	962	968
1915 ..	10,245	9,724	19,969	6,239	5,832	12,071	—521	—407	+7,898	949	935
1916 ..	10,648	9,931	20,579	6,951	6,766	13,717	—717	—185	+6,862	933	973
1917 ..	11,393	10,589	21,982	6,860	6,760	13,620	—804	—100	+8,362	929	985
1918 ..	10,420	9,548	19,968	18,629	20,354	38,983	—872	+1,725	—19,015	916	1,092
1919 ..	9,993	9,093	19,086	8,857	8,644	17,501	—900	—213	+1,585	910	975
1920 ..	10,186	9,547	19,733	7,649	7,158	14,807	—639	—491	+4,926	937	936

SUBSIDIARY TABLE VI.

Number of Deaths of each sex at different ages.

Age.	1913.		1914.		1915.		1916.		1917.		1918.		Total.		Average number of female deaths per 1,000 male deaths.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PUNJAB	304,326	279,458	318,325	299,748	359,821	342,729	309,973	283,697	378,785	354,324	797,343	768,217	24,68,578	23,28,173	943
Under 1	99,976	90,520	97,853	90,208	82,908	76,058	93,136	83,360	113,603	103,782	105,668	95,410	593,144	539,338	909
1—4 (inclusive)	60,819	59,799	59,722	59,137	48,357	47,329	69,564	67,646	85,270	86,370	93,490	89,477	417,222	409,758	982
5—9 (inclusive)	16,071	15,287	16,875	17,166	24,132	26,525	17,316	16,191	22,903	22,318	55,032	54,910	152,329	152,397	1,000
10—14 (inclusive)	10,320	9,725	11,913	12,475	21,350	23,581	9,454	9,100	11,688	11,188	50,133	51,028	114,858	117,397	1,022
15—19 (inclusive)	8,182	7,959	9,800	9,866	17,463	17,218	7,935	7,690	9,119	9,562	53,483	53,470	106,309	105,765	995
20—29 (inclusive)	17,649	19,080	19,866	21,538	30,294	30,836	15,241	17,356	17,786	20,915	109,135	114,940	210,271	224,865	1,069
30—39 (inclusive)	16,150	16,916	19,028	19,912	29,537	29,908	15,714	16,439	18,635	20,085	91,873	95,268	190,967	198,528	1,040
40—49 (inclusive)	16,946	13,815	19,542	16,801	28,177	25,914	16,914	14,223	20,817	17,797	75,761	70,734	178,157	159,284	894
50—59 (inclusive)	16,880	12,766	18,989	15,237	25,914	22,219	18,164	13,976	22,303	17,213	66,650	58,908	169,100	140,319	830
60 and over	41,333	33,591	44,737	37,408	51,692	43,111	46,505	37,516	56,131	44,794	95,818	84,072	336,216	280,492	834
DELHI	8,174	7,703	7,661	7,418	6,239	5,832	6,951	6,766	6,860	6,760	18,629	20,354	54,514	54,833	1,006
Under 1	2,603	2,277	2,885	2,679	2,346	2,065	2,119	2,173	2,607	2,336	3,410	2,940	16,270	14,470	889
1—4 (inclusive)	1,228	1,249	1,036	1,054	820	843	1,137	1,302	1,271	1,415	3,241	2,918	9,033	8,981	994
5—9 (inclusive)	343	314	266	232	177	173	244	265	289	259	1,370	1,279	2,698	2,522	935
10—14 (inclusive)	235	269	193	181	112	165	148	162	134	190	1,031	1,141	1,853	2,108	1,138
15—19 (inclusive)	219	300	189	285	143	216	174	222	140	239	1,386	2,032	2,281	3,324	1,457
20—29 (inclusive)	616	743	529	755	403	557	414	551	371	562	2,597	3,673	4,930	6,841	1,388
30—39 (inclusive)	657	631	549	512	405	379	367	402	362	419	1,721	2,196	4,061	4,539	1,118
40—49 (inclusive)	638	516	514	452	478	405	463	350	399	329	1,364	1,404	3,880	3,486	897
50—59 (inclusive)	596	448	504	402	456	321	418	353	410	293	1,237	1,283	3,621	3,100	856
60 and over	1,009	926	966	866	899	678	867	786	877	718	1,263	1,488	5,881	5,462	929

SUBSIDIARY TABLE VI.
Number of Deaths of each sex at different ages.

SUBSIDIARY TABLE VII.

Proportion of females per 1,000 males (by Tahsils) Census 1921.

PROPORTION OF FEMALES PER 1,000 MALES.			
	Tahsil.		
District.	Number.	Name.	Proportion.
1	2	3	4
HISSAR.	1	Hissar	859
	2	Hansi	878
	3	Bhiwani	887
	4	Fatehabad	891
	5	Sirsa	861
ROHTAK.	6	Rohtak	829
	7	Jhajjar	867
	8	Gohana	852
	9	Sonepat	854
GURGAON.	10	Gurgaon	860
	11	Ferozepur-Jhirka	867
	12	Nuh	853
	13	Palwal	836
	14	Rewari	863
	15	Ballabgarh	847
KARNAL.	16	Karnal	835
	17	Panipat	832
	18	Kaithal	825
	19	Thanesar	812
AMBALA.	20	Ambala	751
	21	Kharar	753
	22	Jagadhri	784
	23	Naraingarh	816
	24	Rupar	783
SIMLA.	25	Simla	388
	26	Kot Khai	971
KANGRA.	27	Kangra	919
	28	Dehra	942
	29	Nurpur	788
	30	Hamirpur	997
	31	Palampur	974
	32	Kulu	1,015
HOSHIAR-PUR.	33	Hoshiarpur	845
	34	Dasuya	839
	35	Garhshankar	830
	36	Una	929
JULLUN-DUR.	37	Jullundur	804
	38	Nakodar	828
	39	Phillaur	784
	40	Nawashahr	812
LUDHI-ANA.	41	Ludhiana	772
	42	Jagraon	830
	43	Samrala	732
FEROZE-PORE.	44	Ferozepore	768
	45	Zira	829
	46	Moga	792
	47	Muktsar	805
	48	Fazilka	814

PROPORTION OF FEMALES PER 1,000 MALES.			
	Tahsil.		
District.	Number.	Name.	Proportion.
1	2	3	4
LAHORE.	49	Lahore	664
	50	Chunian	835
	51	Kasur	828
AMRIT-SAR.	52	Amritsar	761
	53	Tarn Taran	809
	54	Ajnala	834
GURDAS-PUR.	55	Gurdaspur	790
	56	Batala	813
	57	Pathankot	749
	58	Shakargarh	875
SIALKOT.	59	Sialkot	822
	60	Pasrur	859
	61	Zafarwal	866
	62	Raya	837
	63	Daska	817
GUJRAN-WALA.	64	Gujranwala	770
	65	Wazirabad	800
	66	Hafizabad	801
SHEIKHU-PURA.	67	Khangah Dogran	781
	68	Sharakpur	785
GUJRAT.	69	Gujrat	904
	70	Kharian	961
	71	Phalia	788
SHAH-PUR.	72	Shahpur	874
	73	Khushab	974
	74	Bhalwal	799
	75	Sargodha	745
JHELUM.	76	Jhelum	939
	77	Pind Dadan Khan	976
	78	Chakwal	1,018
RAWAL-PINDI.	79	Rawalpindi	678
	80	Gujar Khan	974
	81	Murree	926
	82	Kahuta	1,013
ATTOCK.	83	Attock	875
	84	Pindigheb	934
	85	Talagang	1,012
	86	Fateh Jang	902
MIAN-WALI.	87	Mianwali	894
	88	Bhakkar	867
	89	Isakhel	906

PROPORTION OF FEMALES PER 1,000 MALES.			
	Tahsil.		
District.	Number.	Name.	Proportion.
1	2	3	4
MONT-GOMERY.	90	Montgomery	767
	91	Okara	800
	92	Dipalpur	847
	93	Pakpattan	862
LYALLPUR.	94	Lyallpur	774
	95	Samundri	818
	96	Toba Tek Singh	789
	97	Jaranwala	801
JHANG.	98	Jhang	874
	99	Chiniot	853
	100	Shorkot	882
MULTAN.	101	Multan	805
	102	Shujabad	849
	103	Lodhran	850
	104	Mailsi	825
	105	Khanewal	763
	106	Kabirwala	866
MUZAF-FARGARH.	107	Muzaffargarh	841
	108	Alipur	836
	109	Sinawan	829
	110	Leiah	862
D. G. KHAN.	111	D. G. Khan	826
	112	Sangar	890
	113	Rajanpur	772
	114	Jampur	813
		Biloch Trans-Frontier	767
DELHI.	1	Delhi	733
STATES.	1	Nabha	792
	2	Patiala	791
	3	Loharu	882
	4	Faridkot	789
	5	Kapurthala	816
	6	Mandi	944
	7	Suket	897
	8	Chamba	911
	9	Bahawalpur	816
	10	Jind	816

CHAPTER VII.

Civil Condition.

SECTION I.—GENERAL.

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Section I.—General.

128. The instruction to enumerators for filling up the schedule in respect of column 6—"married," "unmarried" or "widowed," was as follows:—

> "Enter each person whether infant, child or grown-up as married, unmarried or widowed; divorced persons should be entered as widowed."

Instruction to Enumerators.

Further the supplementary instruction to supervisors printed as Appendix I to the Code of Census Procedure, 1921, stated:—

> "Column 6.—A woman who has never been married must be shown in column 6 as unmarried, even though she may be a prostitute or concubine. Persons who are recognised by custom as married are to be entered as such, even though they had not gone through the full ceremony, *e. g.*, the widows who have taken a second husband by the rite known as *karewa* or *chaddar andazi*."

The *karewa* or *chaddar andazi* marriage is, as is well known, a most shadowy affair, and in the Central Punjab forms one of the most frequent causes of criminal litigation, the death of a husband being commonly the signal for the widow to attempt to escape from her late husband's home, an attempt which is countered by the deceased husband's brothers bringing a complaint under section 498 of the Indian Penal Code. In such cases the brother who happens to be the complainant, will assert that a marriage by *karewa* or *chaddar andazi* has taken place, the performance of the ceremony being strenuously denied by the widow. The introduction of a voluntary system of marriage registration, which has been introduced into the several districts of the Punjab, has helped to give greater certainty as to whether such a marriage has taken place or not.

The figures regarding civil condition distribution according to age and sex are given in Imperial Table VII. This table is divided into three parts: Part A shows the distribution for the Punjab as a whole and for the Punjab States for both groups, and for Delhi, for each main religion by age, sex and civil condition. Part B gives the distribution for districts and States, and Part C gives similar details for cities and selected towns, in which the figures for Buddhists, Parsis and Jews are also included. Further information is contained in the subsidiary tables to this chapter.

Subsidiary Table I gives the distribution by civil condition of 1,000 of each sex, religion and main age-period for each of the last five censuses.

Subsidiary Table II gives the distribution by civil condition of 1,000 of each sex for various age-periods by religions and natural divisions.

Subsidiary Table III gives the distribution by age and civil condition of 10,000 persons of each sex and religion.

Subsidiary Table IV gives the proportions of the sexes for different religions by natural divisions, and for various age-periods.

Subsidiary Table V gives the distribution by civil condition for 1,000 of each sex for selected castes at various ages.

The remaining subsidiary tables embody the main statistics obtained from the Family Census.

Subsidiary Tables VI, VI-1, VI-2, VI-3, VI-4, VI-5 and VI-6 give the number of children born and alive for various durations of marriage, and for male and female children separately. The sex of the firstborn child is also given, and the age of the woman at marriage, together with the number of children born to women of various ages at marriage. Subsidiary Table VI gives the figures for all the caste-groups among whom the enquiry was made, while the other Tables VI-1, VI-2, VI-3, VI-4, VI-5 and VI-6 give the figures for each caste-group separately; Table VI-1 dealing with the clerics, VI-2 with agriculturists, VI-3 with traders, VI-4 with artisans, VI-5 with menials and VI-6 with criminals.

Subsidiary Table VII-A shows the gross fertility for males and females for each year of marriage up to 10, and thereafter by quinquennial periods up to 30, for each caste-group separately.

Subsidiary Table VII-B gives the same information for the nett fertility, that is, for the number of children actually alive at the time of the Family Census.

Subsidiary Tables VIII-A and VIII-B give the comparison of the observed fertilities (gross and nett) together with the graduated values determined by calculation.

Subsidiary Tables IX-A, IX-B, IX-C and IX-D give the results of a special enquiry into the frequency of cousin marriage among Musalmans in the Attock, Muzaffargarh and Gurdaspur districts, and the Delhi province, respectively.

Practical universality of marriage.

129. The proportion of males who live anything like the allotted span of years and remain unmarried is very small, and the proportion of females even smaller. In the whole of the Punjab only 5·6 per cent. of the males over 60, and 0·7 per cent. of the females, have never been married. The percentage of unmarried men over 60 (which excludes widowers) is 2·9 per cent. for Christians, 3·8 per cent. for Musalmans, 7·1 per cent. for Hindus, 9·0 per cent. for Sikhs and 9·1 per cent. for Jains. Spinsters over 60 years of age form 0·3 per cent. of the age-groups for Sikhs, 0·4 per cent. for Hindus, 0·7 per cent. for Jains, 1·0 per cent. for Musalmans and 1·8 per cent. for Christians. The relative fewness of females among Sikhs is responsible for the relatively high proportion of unmarried men, and for the relatively low proportion of unmarried females among this religious group as compared with the corresponding proportions for other religious groups. During the last 40 years there has been a tendency for fewer males to remain unmarried among those of 60 and over. Details are given in the marginal table.

Percentage of unmarried men over 60 (excluding widowers) for each of the last five censuses.

	1881.	1891.	1901.	1911.	1921.
Hindus	8·7	8·2	8·0	7·6	7·1
Musalmans	5·1	4·1	4·0	4·5	3·8
Christians	8·7	2·9	3·1	3·8	2·9
Sikhs	10·0	9·9	9·8	10·1	9·0

On the other hand there seems to be a tendency during the last 40 years to postpone the age of marriage, as in the younger age-groups from 5 to 19 the proportion of unmarried males has increased somewhat since 1881. Taking, for example, the age-group of 15—19 years, the percentage of unmarried males has increased as follows:—

	From	To
Hindus	60·3 per cent.	64·9 per cent.
Musalmans	71·0 „	77·6 „
Sikhs	63·6 „	73·1 „

Only among Christians has the reverse tendency been observable, and the number of unmarried between 15 and 19 has fallen from 92·1 per cent. in 1881 to 70·3 per cent. in 1921. The reason for this drop among Christians is undoubtedly the fact that in 1881 the Christians enumerated were mainly Europeans, among whom there would of course be a large proportion of unmarried males between 15 and 19. The conversion of a number of Indians to Christianity during the last 40 years would, therefore, bring about a reduction in the proportion of unmarried males of the younger ages. The question of the age of the woman at marriage is discussed in detail in paragraph 134 of Section II of this Chapter.

At any given time, irrespective of age, rather more than half the males and about two-fifths of the females alive are unmarried. The figures for the British Territory, Punjab States and the Punjab and Delhi are given in the marginal table.

Civil condition.	1921. Males	1921. Females.	Civil condition.	1921. Males.	1921. Females.
BRITISH TERRITORY (PUNJAB AND DELHI)			BRITISH TERRITORY (DELHI).		
Unmarried	538	408	Unmarried	438	346
Married	375	460	Married	464	521
Widowed	87	132	Widowed	98	133
PUNJAB STATES.			TOTAL PROVINCES (PUNJAB AND DELHI).		
Unmarried	518	372	Unmarried	535	402
Married	388	482	Married	373	464
Widowed	94	146	Widowed	88	134
BRITISH TERRITORY (PUNJAB).			PUNJAB PROVINCE.		
Unmarried	541	409	Unmarried	537	403
Married	373	459	Married	375	463
Widowed	86	132	Widowed	88	134

The earliness of marriage among Punjabis is well illustrated by the marginal table which shows the number of married males and females for each of the first four quinquennial age-groups. It will be observed that 33 per cent. of male Hindus and 85 per cent. of female Hindus are married before the age of 20, while among Musalmans the corresponding figures are 21 per cent. for males and 68 per cent. for females. These figures may be compared with those of 1881 when 38 per cent. of Hindu males and 88 per cent. of Hindu females were married before the age of 20, while 28 per cent. of Musalman males and 76 per cent. of Musalman females were married before the age of 20.

Age-periods.	MARRIED PERSONS *per mille*, 1921. *Male.*				*Females.*			
	Hindus.	Musalmans.	Jains.	Sikhs.	Hindus.	Musalmans.	Jains.	Sikhs.
Under 5 ..	2	1	2	..	3	1	..	1
5—9 (inclusive) ..	22	8	6	6	68	25	16	24
10—14 " ..	113	50	80	63	362	185	194	221
15—19 " ..	330	213	388	258	848	680	816	780

Widows.

130. One consequence of the very early age of marriage is that many women are left widowed before they reach the age of puberty. Thus in the Punjab, at the Census of 1921 there were no less than 27 widows under the age of 5, there were 2,835 under the age of 10, 8,963 under the age of 15, and 26,400 widows under the age of 20. Taking the widows between the ages of 15 and 19 as typical, the Jains show the highest percentage of widows (3·2 per cent.), Hindus come next with 3·0 per cent., Musalmans next with 2·9 per cent., Sikhs 1·7 per cent. and Christians 0·3 per cent. The proportion of widows below the age of 40 is shown for the last five censuses in the marginal table.

Religions.	PROPORTION OF WIDOWS PER 1,000 IN THE AGES OF 0—39 (INCLUSIVE). *Punjab and Delhi.* 1921.	1911.	1901.	1891.	1881.	*Punjab.* 1921.	*Delhi.* 1921.
Hindus ..	49	58	47	68	54	49	43
Musalmans ..	29	32	30	72	34	29	27
Jains ..	79	101	59	90	69	77	92

Widow re-marriage.

131. The evils which arise from early widowhood have been vigorously combated by various reformers. In the Punjab the most prominent body which has undertaken this branch of social reform is the Vidhva Vivah Sahaik Sabha of Lahore, under the Presidentship of Sir Ganga Ram, Rai Bahadur, C.I.E., M.V.O., which was inaugurated in 1914. The objects of this society, as given by the Honorary Secretary, are—

(1) to encourage and arrange widow-marriages ;

(2) to place proper literature in the hands of the public.

The society has brought about the following number of widow re-marriages :—

1914-15 ..	12
1916 ..	13
1917 ..	31
1918 ..	40
1919 ..	90
1920 ..	220
1921 ..	317
1922 ..	453

Thus the Sabha is steadily expanding, and is effectively bringing about a steady increase in the number of widow remarriages. From the list of marriages published for 1921 some very interesting information is available, namely, that out of 317 widow-marriages arranged by the society, no less than 47, *viz.*, 15 per cent. took place between parties of different castes; a fact which is in itself evidence of a tendency to loosen the bonds of marriage within the caste. One notable feature of these inter-caste widow-marriages is that the widow has, in nearly every instance, to marry below her own caste; thus a Brahman widow will marry an Arora or Aggarwal, a Rajput widow will marry a Khatri or a Sud, a Khatri widow will marry an Arora, but, of the 47 marriages between parties of different castes, I can only find one instance, that of an Arora widow who married a Khatri gentleman, where the widow gained in social status by remarriage. However this may be, it is clear that the aims of the Vidhva Vivah Sahaik Sabha are philanthropic, and that it is doing a valuable work for the community in saving young widows from degradation.

Section II.—Fertility Data and Allied Topics.

132. A special census, commencing in August 1920 and completed in July 1921, was carried out at the suggestion of the Census Commissioner for India, in order to obtain data for discussion of the problems of the effect of the duration of marriage on fertility, of the size of the family, of the age of the woman at marriage, of the effect of primogeniture on longevity, and the like. The enquiry was a voluntary one, and no pressure was brought to bear to obtain replies. It follows that the data do not necessarily form a random sample of all marriages of the type to which the enquiry was confined, namely, to families in which both parents were alive at the time of the census, and in which there was, or (presumably) had been only one wife. The data recorded were as follows:— The Family Census.

(1) Name of the district or State.
(2) Name of the informant.
(3) Informant's caste.
(4) Informant's age.
(5) His wife's age.
(6) Duration of marriage.
(7) Number of children born alive—(*a*) male, (*b*) female, (*c*) total.
(8) Number of children still alive—(*a*) male, (*b*) female, (*c*) total.
(9) Sex of the first-born.

The figures obtained were sorted to show the numbers of children, male and female, born alive, or still living, number of childless marriages, the age of the woman at marriage, and the largeness of the family alive at the time of the census, classified according to the age of the woman at marriage, for marriages of five years' duration and over.

The data were further classified in six large groups each of which comprised a miscellany of castes, though there is a general homogeneity of occupation in each group. For example —

(1) group 1 is comprised mainly of genealogists, priests, writers and merchants;
(2) group 2 is almost wholly comprised of the agricultural castes;
(3) group 3 is formed from the trading classes;
(4) group 4 comprises artisans, carpenters, masons, goldsmiths and what not;
(5) group 5 is formed from other manual workers and menials, such as oilmen, sweepers, washermen, butchers, potters, barbers and so forth;
(6) group 6 is comprised of no less than 108 castes, some of whom have families of very high standing, such as the Ahluwalia, Qazilbash, Sheikh and Chishti, but of whom the majority belong to the tribes which lead a wandering, criminal and generally precarious existence, for example, the Bazigar, the Bawaria, the Pakhiwara, the Chirimar, the Sansi, the Kanjar, the Mullah, the Nat and the Harni, to mention only a few of the more noted castes.

The actual caste names which are included in each group are given in the following list :—

List showing the castes grouped together for the purposes of the Family Census enquiry.

Group 1.—Bhat (Bhatra), Bhat or Rai Brahman, Padha, Ulma, Kayasth, Khatri.

Group 2.—Arain, Awan, Ahir, Bahti, Bishnoi, Biloch, Bodla, Pathan, Thakkar, Jat, Janjua, Chang, Dogar, Dhund, Rathi, Rajput, Rawat, Sansar, Sati, Sayed, Saini, Qureshi, Karal, Kamboh, Kanet, Khokhar, Gaddi, Gakkhar, Gujjar, Ghirath, Lilla, Lodha, Mali, Moghal, Maliar, Mahton, Meo.

Group 3.—Arora, Bania, Bohra, Bhabra, Bhatia, Khoja, Dhusar, Sud, Khakha, Mahajan.

Group 4.—Tarkhan, Tank or Toba, Raj, Ram Garhia, Sunar, Lohar, Mair.

Group 5.—Od, Batwal, Barar, Barwala, Baledi, Beldar, Bhil, Pasi, Teli, Julaha, Jhiwar, Chamar, Chanal, Chuhra, Chhimba, Dagi and Koli, Daoli, Dosali, Dhanak, Dhobi, Dhogri, Dumna, Rihar, Sarera, Ghulam, Qassab, Kumhar, Kanera, Kori, Gandhila, Lilari, Mussalli, Mochi, Mahtam, Mehra, Mirasi, Nai, Hadi.

Group 6.—Abdal, Arab, Arya, Agir, Ahluwalia, Aheri, Bazigar, Bagri, Bawaria, Baddun, Bukhara Bangali, Bhatra, Bhand, Bharai, Bhatiara, Bharbhunja, Bahrupia, Bhanjra, Bhojki, Bairagi, Patwa, Pachahdha, Paracha, Pakhiwara, Phiphra, Perna, Penja, Tajik, Tagah, Turk, Tamboli, Tanaoli, Thori, Thathiar, Jangida, Jogi, Jogi-Rawal, Jhoja, Jhabel, Chirimar, Chishti, Changar, Churigar, Khalsa, Khanzada, Khumra, Khushabi, Darugar, Daudpotra, Darzi, Dabgar, Rahbari, Rababi, Ror, Sansi, Sapela or Sapadha, Sirkiband, Shoragar, Sheikh, Sikligar, Faqir, Qazilbash, Qalandar, Kapri, Kathia, Kachhi, Kangar, Kurmi, Kashmiri, Kakkezai, Kalal, Kalwar, Kamangar, Kanjar, Kanchan, Kunjra, Kehal, Khatik, Gadi, Gara, Garri, Gagra, Gadaria, Gorkha, Gosain, Ghai, Ghosi, Kedari, Labana, Machhi, Mazhabi, Mujawir, Mallah, Maniar, Miana, Megh, Mina, Natak, Nat, Lungar, Niaria, Harni, Hali, Hijra, Hesi.

The number of families for which data were obtained was 166,419, the division according to caste-groups being as follows. For convenience I have given a general name to each group corresponding to its principal component occupation :—

Caste-group.	Number of families for which data were recorded.	Number of families with a duration of marriage of 5 years and over.
1. Clerics	16,611	15,532
2. Agriculturists	74,813	69,406
3. Traders	11,879	10,918
4. Artisans	7,649	7,086
5. Menials	31,832	29,289
6. Criminals	23,635	21,280
	166,419	153,511

As all the information is further classified separately for each Punjab district and State, as well as by the natural geographical divisions of Indo-Gangetic Plain West, Himalayan, Sub-Himalayan and North-West Dry Area, it is clear that, if the data are reliable, as they probably are to within the same limits of accuracy as the Census proper, they form a mass of extremely valuable material, to the examination of which one might appropriately devote months of labour, were it feasible to do so.

It is out of question even to print anything but the bare totals for the Punjab of the figures for each caste-group and for all caste-groups together. These are given in Subsidiary Tables VI, VI (1), VI (2), VI (3), VI (4), VI (5) and VI (6), the numbers in brackets referring to the caste-group number assigned in the list on this page. Only a few of the many interesting paths of enquiry, which invite seemingly to distant bournes can be pursued, and even these must be trodden warily, else we shall soon be lost in a forest of perplexity.

Sex of the first-born.

133. The following are the data showing the observed numbers, and the ratio of the numbers of female to male first-born children, according to duration of marriage for all caste-groups :—

Duration of marriage in years.	0—4.	5—9.	10—14.	15—19.	20—24.	25—29.	30 and over.
Number of female first-born ..	3,054	10,358	12,321	10,982	9,765	6,242	13,806
Number of male first-born ..	3,925	12,218	16,317	14,20[illegible]	13,034	8,497	20,265
Ratio of numbers of female first-born to male first-born	0·778	0·848	0·755	0·77[illegible]	0·749	0·735	0·681

On the whole, therefore, there is a tendency for there to be more female first-born in the case of marriages of duration between 5 and 10 years than for marriages which have lasted less than 5 or more than 10 years. The observed ratio for the first 10 years of duration of marriage is as follows for each year separately :—

Duration of marriage in years.*	0	1	2	3	4	5	6	7	8	9
Ratio of numbers of female to male first-born	0	0·785	0·753	0·737	0·807	0·849	0·825	0·866	0·852	0·846

Thus, while the first-born child is, according to these figures, always less likely to be a girl than a boy, it is more likely to be a girl for marriages which had lasted (in 1920-21) from 5 to 10 years than any other time, and the maximum likelihood of a female first-born is for those marriages which took place 7 years before the Family Census, that is in 1913-14.†

Now, in the first place, it is obvious that the duration of the marriage *after the birth of the first child* can have no possible effect on the sex of the first-born, and as the first-born children of parents who had been married, say, 15 years in 1920-21, may have been born in the 1st, 2nd, 3rd years of marriage, the ratio of the sexes of the first-born of parents, whose duration of marriage was 15 years, includes births which took place from the 1st to the 15th year of marriage.

What we really want to know is whether the sex-ratio of first-born children varies with the variation in the years elapsed from marriage to the date of birth of the first child, and on this problem the light obtained is only indirect. Thus, we know that marriages of long duration will include cases in which the first-born child was born after several years of marriage, while marriages of short duration cannot include such cases; but numerical precision cannot be reached as to the exact way in which the first-born sex-ratio varies with the interval between marriage and the birth of the first child. All that it is possible to say is that there is an indication that the first child when it is born in the early and late years of marriage is more likely to be a boy than in the middle (5—10) years of married life. Even this conclusion must be regarded as subject to error from the concealment of female births, to which the Punjab is prone. If this tendency (as there are reasons to think possible) is more marked for children born in the early and late years, when disappointment at bearing a girl-child may be most intense, then our figures may be of no use at all from a physiological stand-point.

Lastly, in this connection it will be necessary to examine the general ratio of female to male births, any variation in which, for example an increase in this ratio, during the last 30 years, would produce a smaller female to male ratio of first-born children for marriages of long duration (in 1921) than for marriages of short duration; and this would vitiate, *pro tanto*, the tentative result suggested above.

For this purpose we will compare the ratio of female to male first-born for each year of duration of marriage with the general ratio of female to male births. The question arises "which year should be adopted for a comparison ?" Take for example marriages which have lasted 8 years; some of them will have had their first-born child in the first year of marriage, some in the second, and so forth. Now the percentage of childless marriages for marriages of various durations is as shown in the margin. These figures show the percentage of childless marriages on the total number of marriages which have lasted from "n" to "$n+1$" years, where "n" is the tabled value of the duration of marriage. Thus of 100 marriages which have *completed* 4 years, 37 per cent. are childless at the end of the 4th year. From this result, assuming that we are dealing with marriages in which there is no mortality in the first 10 years, we find the percentage of first-born children occurring as in column 3 of the marginal table, so that the majority of

Showing percentage of childless marriages for the first 10 years of duration of married life.

Duration of marriage.	Percentage of childless marriages.	Percentage of first-born children.
0	99	1
1	84	15
2	51	33
3	37	14
4	26	11
5	19	7
6	13	6
7	9	4
8	8	1
9	5	3

* Here a marriage classed as of duration 3 years, say, will have lasted less than 4 years and not less than 3 years. A marriage of 0 year's duration is one that has lasted less than 1 year.

† The statement in the text is not equivalent to saying that the maximum likelihood of a female first-born is for marriages of 7 years' duration.

first-born occur in marriages of 2 years' duration, that is in the 3rd year of marriage.*

We may assume, therefore, that the first child is most usually born in the 3rd year of marriage, and that consequently for a marriage in the 9th year, say, that is of 8 years' duration the first child was born 6 years previously. For marriages in the 1st and 2nd years it will be appropriate to assume that the first-born child has occurred 0 years previously. So, for marriages which had, say, 8 years' duration at the time of the Family Census (1920-21) it will be proper to compare the sex-ratio of the first-born with the sex-ratio of all children born in 1915. For marriages of 7 years' duration the comparison must be made with the general sex-ratio of births in 1916 and so on. The following result is reached :—

Duration of marriage in years.	Year for which the general sex-ratio at birth is selected.	Sex-ratio of first-born female/male.	General sex ratio at birth.
0	1921	0 00	..
1	1920	0 78	0·90
2	1920	0·75	0·90
3	1920	0·76	0·90
4	1919	0·81	0·89
5	1918	0·85	0·89
6	1917	0·82	0·91
7	1916	0·87	0·91
8	1915	0·85	0·91
9	1914	0·85	0·91

On the face of it, therefore, the conclusion to be drawn is that although some part of the variation of the sex-ratio for marriages of longer duration is to be attributed to a secular change in the general sex-ratio, yet the proposition is probably true that while the proportion of female to male births is about 9 to 10, the proportion of female to males among first-born children is only about 8 to 10. If the data are reliable the result is of great physiological and sociological significance; but, however attractive fearless assertion may be, it is wiser to remind the reader of the pride that the Punjabi takes in his male children, and of the effect that pride may have in causing him to misstate the sex of his first-born.†

Age of the woman at marriage.

134. When we observe that there were 64 persons (37 males and 27 females) who were *widowed* before the age of 5, enumerated in the 1921 Census, the youthfulness of some bridegrooms and brides has been sufficiently emphasized. As is well-known, consummation of the marriage does not take place (perhaps many years later) till the *muklawa* ceremony has been performed, the bride in the meantime living with her parents. Even so the marriage proper will take place as soon as possible after the girl has reached the age of puberty. Unlike the schedules of the main census, the Family Census schedules record the duration of marriage dating from the time at which the woman came to live in her husband's house, and therefore the " duration of marriage " does not correspond with the period elapsing since the time of the civil marriage, nor with the time elapsed since the commencement of cohabitation. In fact, the recorded " duration of marriage " will ordinarily date from the time of the *muklawa* (home-bringing) ceremony, which usually takes place several years after the initial *nikah* or *shadi*

*This would not be exactly true if the Family Census was not a strictly random selection from all marriages. It is probable that it is not so, and that District Officers naturally tended to get information about marriages which had larger rather than smaller families.

†The percentage of childlessness for each of the first ten years of marriage for each caste-group separately is as follows :—

Duration of marriage.	0	1	2	3	4	5	6	7	8	9 years.
Caste-group 1	100	80	49	37	24	16	15	10	5	4
" " 2	99	84	51	37	26	19	12	9	9	4
" " 3	100	86	50	40	28	17	10	9	7	6
" " 4	100	80	39	34	23	18	13	9	9	4
" " 5	99	88	57	41	29	22	17	11	7	7
" " 6	100	83	49	32	27	18	12	10	8	6

(civil marriage), and, not infrequently, a good time before the actual consummation of the marriage with the husband.§

In studying the data of the Family Census, therefore, it must be remembered that when we find that 15 per cent. of the women were below the age of 10 at marriage, that this denotes that these girls had been married civilly at a very young age indeed, and had actually come to reside in their husband's home (though not necessarily to cohabit with him) before the age of 10.

The results obtained from the Family Census are exhibited in two tables, the first showing the actually observed numbers of women of each age at marriage, and the latter the relevant percentages. The data are given separately for each caste-group.

*Table showing the actual number of women whose "age at marriage" is given.**

	Below 10	10—14.	15—19.	20—24.	25—29.	30—34.	35—39.	40 and over.	Total.
All Castes ..	23,413	55,673	48,685	16,761	5,409	2,106	875	589	153,511
Caste-group 1.. ..	3,490	6,447	3,988	972	290	118	129	98	15,532
" 2.. ..	9,330	24,361	23,422	8,353	2,417	1,007	317	199	69,406
" 3.. ..	1,603	4,631	3,384	950	235	68	35	12	10,918
" 4.. ..	950	2,627	2,319	790	244	90	43	23	7,086
" 5.. ..	5,179	10,395	8,823	3,241	976	393	157	125	29,289
" 6.. ..	2,861	7,212	6,749	2,455	1,247	430	194	132	21,280

*Table showing the percentage numbers of women whose "age at marriage" is given.**

	Below 10	10—14.	15—19.	20—24.	25—29.	30—34.	35—39.	40 and over.	Total.
All Castes	15·2	36·3	31·7	10·9	3·5	1·4	0·6	0·4	100
Caste-group 1.. ..	22·5	41·5	25·7	6·2	1·9	0·8	0·8	0·6	100
" 2.. ..	13·4	35·1	33·7	12·0	3·5	1·5	0·5	0·3	100
" 3.. ..	14·7	42·4	31·0	8·7	2·2	0·6	0·3	0·1	100
" 4.. ..	13·4	37·1	32·7	11·2	3·4	1·3	0·6	0·3	100
" 5.. ..	17·7	35·5	30·1	11·1	3·3	1·3	0·5	0·4	99·9
" 6.. ..	13·4	33·9	31·7	11·5	5·9	2·0	0·9	0·6	99·9

From this it will appear that a greater percentage of clerics (22·5) marry girls below the age of 10 than any other caste-group. Next in order of preference for very young wives come menials (17·7 per cent.), then traders (14·7), and lastly agriculturists, artisans and criminals, all of whom marry when 13·4 per cent. of their wives are below the age of ten. Caste-group 3, comprising a majority of traders, has the most marked aversion of all to marry women above the age of 40.†

§Hardly less striking that the immaturity of the wife at the time of arrival at her husband's home, is the immaturity of the husband himself. Among certain tribes of the Central Punjab this immaturity may result in the girl-wife reaching puberty before the boy-husband, a circumstance of which the boy's father is apt to take advantage. A Punjabi saying pithily sums up the consequences by concluding that "the firstborn child is the child of his grandfather and not of his father." The genetic effects of this practice will be that the correlation of the characters of the putative father and son will fall below the value of about one-half which is the anticipated correlation for true paternal inheritance. The point will be discussed further in examining the anthropometric data collected by the writer from the Central Punjab, a task which is deferred to Chapter XI.

*"Age at marriage" must be interpreted in the sense explained, *viz.*, "age at which the woman comes to live in her husband's home."

†The general agreement between the figures for various caste-groups is, perhaps, partial evidence that the Family Census results are not entirely vitiated by the age-distortion which was a feature of the age returns in the main census.

Effect of age of woman at marriage on fertility.

135. In order to determine what effect, if any, early or late marriages have on fertility, it would be necessary to compare the number of children born for all "completed" marriages, that is to say of 30 years' duration and over, the only variable factor being the age of the women at marriage. Even this would not enable a just estimate of the effect of early or late marriages to be made, as, should early or late marriages tend to increase mortality, this consequence would be obscured, owing to the exclusion from the data of marriages in which one parent had died.

At first sight the requisite information might appear to be available on examining the figures of the number of children for all marriages, of whatever duration, classified according to the age of woman at marriage. The data are exhibited in the statement below:—

Statement of the percentage age-groups of age of woman at marriage with 0, 1, 2, 3 to 5 and 6 to 10 living children for all caste-groups from the Family Census records.

Age of woman at marriage in years.	Below 10	10—14	15—19	20—24	25—29	30—34	35—39	40 and over.	Total.
Percentage on enumerated childless marriages ..	19·1	39·1	26·8	8·6	3·3	1·8	0·8	0·5	100
Percentage on enumerated marriages with 1 child living	16·9	37·6	30·6	9·4	3·0	1·3	0·6	0·7	100
Percentage on enumerated marriages with 2 children living	15·2	37·1	30·9	10·6	3·6	1·5	0·7	0·4	100
Percentage on enumerated marriages with 3 to 5 children living	14·3	34·8	33·2	11·9	3·7	1·3	0·5	0·2	100
Percentage on enumerated marriages with 6 to 10 children living	13·8	36·4	32·2	11·7	2·6	1·3	0·7	0·3	100
Percentage on enumerated total number of marriages with 0, 1, 2, 3 to 5 and 6 to 10 children living	15·2	36·3	31·7	10·9	3·5	1·4	0·6	0·4	100

The conclusions which this table suggests are exactly those which fit in with our preconceived notions of the evil effects of early or late marriages. For this very reason we must be careful to see what fallacies may underlie the seeming simplicity of the data.

Thus, if we look down the columns for the age of the woman at marriage, we observe that *as the number of children increases*—

(1) the proportion of marriages for the age of woman at marriage below 10, *diminishes*,

(2) the proportion of marriages in which the woman is between 10 and 14, *diminishes*,

(3) the proportion of marriages in which the woman is between 15 and 29 at marriage, *increases*,

(4) the proportion of marriages in which the woman is over 30, *diminishes*.

Three explanations seem possible, namely—

I.—That in the years immediately preceding the Family Census of 1920-21, there had been an increase in the number of very early or very late marriages. As a recent marriage must necessarily tend to be a childless marriage at the time of the Family Census, this would account for the relatively high proportion of childless marriages and marriages producing a small number of children, for women marrying below 15 and over 30.

II.—That when the age of the woman at marriage is below 15 and over 30, that the mortality rate of *either* parent, or both parents, becomes higher than in the general population. This would tend to make such marriages of short duration, and, therefore, relatively infertile.

III.—That when women marry below 15 or above 30, the resulting marriage is less fertile than marriages which take place when the woman is between those ages.

Explanation II is, in a sense, virtually the same as explanation III, as if either parent dies, as a consequence of the immaturity or excessive maturity of the woman, at the time of marriage, this is a legitimate argument against such marriages. The first explanation is not, I think, consonant with what is generally believed as regards the increase in the age of woman at marriage during recent years, and therefore explanations II and III may be accepted as correct alternative interpretations of the data, and admit the conclusion that marriages in which the woman is below 15 or above 30 years of age at marriage are relatively infertile.

Size of families

136. In order to compare the relative fertility of one section of the population with another, it is desirable, in the first instance, for simplicity's sake, to examine only the figures for "completed" marriages, which will be the term applied here to marriages of 30 years' duration and over. For this purpose the table compiled below is apposite—

Statement of the percentage of families with 0, 1, 2, 4, 8 and 12 living children for "completed" marriages of 30 years' duration and over.

	Caste-group numbers.						
	1	2	3	4	5	6	1—6
Percentage of families with 0 children living ..	6·04	5·66	4·68	5·69	7·68	6·56	6·12
Percentage of families with 1 child living ..	28·66	18·77	20·20	18·62	20·77	20·98	20·62
Percentage of families with 2 children living ..	32·82	32·59	27·09	30·90	31·32	31·68	31·85
Percentage of families with 3 to 5 children living	26·39	35·53	38·81	36·76	33·66	32·67	34·04
Percentage of families with 6 to 10 children living	6·06	7·36	9·07	7·91	6·49	8·03	7·27
Percentage of families with 12 or more children living ..	0·03	0·09	0·15	0·13	0·08	0·08	0·11

This indicates that for "completed" marriages sterility is very low forming only about 6 per cent. of all such marriages; the highest degree of sterility (7·68 per cent.) being found among menials (comprised in caste-group 5) and the lowest (4·68 per cent.) among traders (caste-group 3).

The most usual size of family for "completed" marriages is from 3 to 5 children, except among clerics (caste-group 1) for which a family of 2 is more common than any other. The mean size of family for "completed" marriages has been calculated by assuming that where the number of recorded children is between 3 and 5 it was actually 4, where it is recorded as between 6 and 10 it was actually 8. The results are recorded in the margin. The results in the first column of figures give the living children, and for marriages of such long duration as 30 years, which are the only ones included in these data, the number of children lost by death is considerable. The results given in the second column of figures show the total fertility, that is the total number of children born, whether alive or not at the time of the Family Census. Thus, while artisans have the greater gross fertility, they come only second to traders in nett fertility, whilst the lowest fertility, both gross and nett, is possessed by the clerics.

Mean size of families, i. e., of living children for "completed" marriages.

Caste-group.	Number of living children.	Number of children born.
1. Clerics	3·70	5·15
2. Agriculturists ..	4·03	5·70
3. Traders ..	4·27	6·05
4. Artisans ..	4·10	6·24
5. *Menials* ..	*3·88*	*5·83*
6. Criminals ..	4·05	5·45
All Castes	3·99	5·68

Variation of fertility with duration of marriage.

137. The terms "gross" and "nett" fertility have been used in the preceding paragraph to denote the number of children born in the past to a single marriage at any given moment, and to the number of children of a single marriage alive at the time of the Family Census. The terms will be used in this sense throughout.

To obtain the "gross" and "nett" fertilities for any given duration of marriage the number of children born and alive, as shown for each caste-group in the sorters' tickets, was divided by the number of marriages for various durations of marriage.*

The results are given in Subsidiary Tables IX-A and IX-B for the "gross" and "nett" fertilities for males and females separately. Naturally the gross fertility rises more or less steadily right up to marriages of 30 years' duration and over, both for males and females. The nett fertility, however, for females shows signs of diminishing as the duration of marriage approaches 30 years.

Diagram 42.

DIAGRAMS SHOWING GROSS AND NET FERTILITY (I.E. FOR ALL CHILDREN BORN ALIVE AND CHILDREN NOW LIVING) FOR VARYING DURATION OF MARRIAGE ACCORDING TO THE PUNJAB CENSUS 1921

FOR CASTE GROUP I.

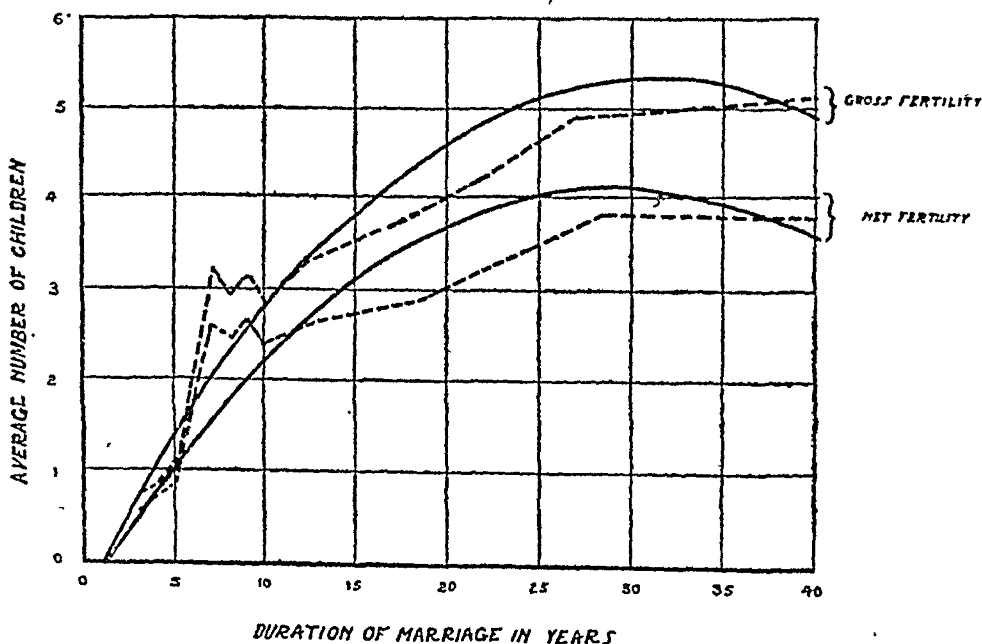
BHAT, BHATRA, BHATOR RAI, BRAHMAN, PADHA, ULHA, KAYASTHA, KHATRI.

EQUATION OF PARABOLA GROSS FERTILITY

$y = -\cdot 2608 + \cdot 3769 x - \cdot 0063 x^2$

EQUATION OF PARABOLA NET FERTILITY

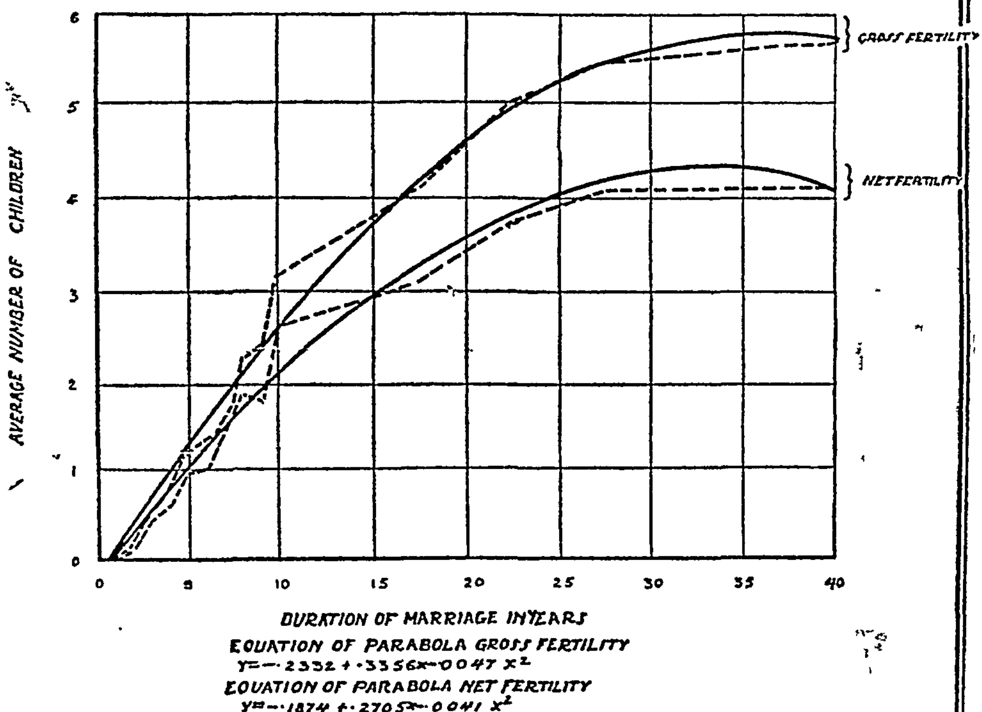
$y = -\cdot 2149 + \cdot 3109 x - \cdot 0055 x^2$



*As very few persons are likely to read a census report, or even a chapter, right through, it is necessary to repeat that the duration of marriage is measured from the time the wife comes to live in her husband's house, and does not date from the time of the civil marriage.

As the figures for the gross and nett fertilities show certain irregularities, which can hardly be due to anything but chance or minor inaccuracies in the statistics, it seems desirable to graduate them by means of some appropriate formula. This was done for all caste-groups separately, and for the totality of caste-groups. The graduation used was that of an equation of the second degree fitted by the method of least squares, the condition imposed being that the fertility (both nett and gross) was zero for a marriage of a duration of 0·7 years. This period, which is equivalent to about $8\frac{1}{2}$ months, corresponds to the minimum time from the time of marriage within which a child is likely to be born.

Diagram 43.



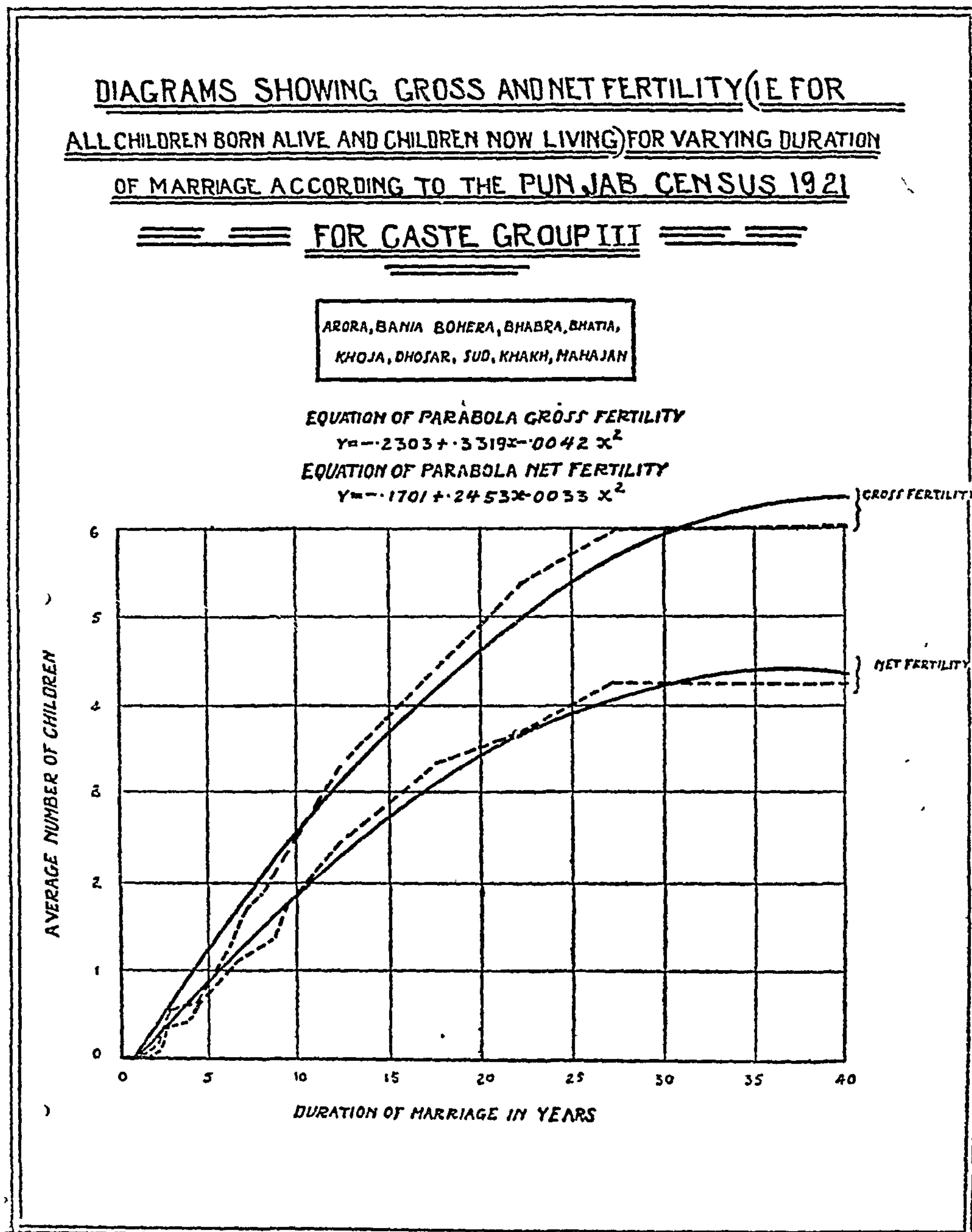
The resultant equations connecting the number of children born (y) with the duration of the marriage in years (x) are as follows for each caste-group :—

	Gross fertility curve.
All caste-groups	$y = -{\cdot}2331 + {\cdot}3363x - {\cdot}0047x^2$
Caste-group 1	$y = -{\cdot}2603 + {\cdot}3769x - {\cdot}0063x^2$
" " 2	$y = -{\cdot}2332 + {\cdot}3356x - {\cdot}0047x^2$
" " 3	$y = -{\cdot}2303 + {\cdot}3319x - {\cdot}0042x^2$
" " 4	$y = -{\cdot}2296 + {\cdot}3308x - {\cdot}0041x^2$
" " 5	$y = -{\cdot}2177 + {\cdot}3136x - {\cdot}0038x^2$
" " 6	$y = -{\cdot}2154 + {\cdot}3050x - {\cdot}0040x^2$

The similarity of all these equations is remarkable, and they show that during the first few years of married life we may say that, roughly. one child is born in every 3 years. The rate of child-bearing shows a steady falling off with duration of marriage, and practically vanishes, for ordinary Punjab conditions, after 36 years of married life.

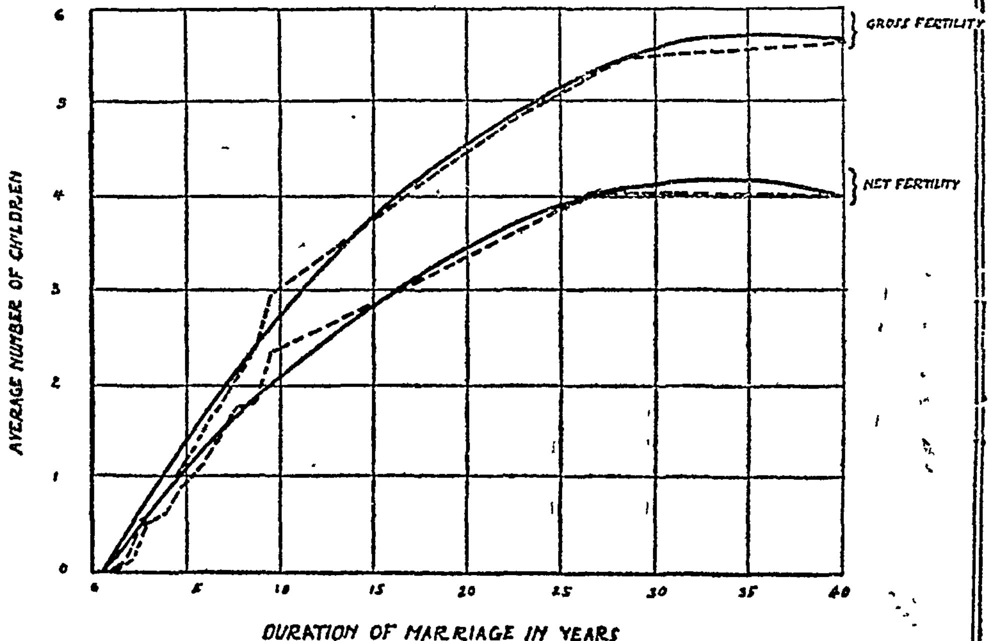
Diagrams 42, 43, 44 and 45 exhibit the actually observed values of the "gross" and "nett" fertilities; together with the curves of graduation, for caste-groups 1, 2 and 3 (clerics, agriculturists and traders) and all castes together.

Diagram 44.



Special attention may be drawn to Diagram 42 which gives the fertility curves for the clerical, religious and generally literate classes. In this case the graduation cannot be described as at all successful, as the observed fertilities rise sharply till 3 children have been born, after about 7 years of married life, and thereafter rise very slowly indeed. Contrasted with all the other curves* the failure of the graduation is conspicuous, and the conclusion seems probable that the high class Hindu knows something of the effective use of contraceptives.

Diagram 45.



* [illegible] of space only prevent the reproduction of the diagrams for caste-groups 4, 5 and 8, for which the parabolic graduation formula affords close agreements with the actual data.

For the rest the diagrams must speak for themselves.

The most favourable time to be born in.

138. It has been trenchantly observed that many of us are very unfortunate in the choice of our parents. Having chosen one's parents however, it is not unimportant to choose the right moment to be born at. The question of the "handicapping of the firstborn" has been dealt with by Professor Karl Pearson.*

It seems clear that the data of the Punjab Family Census would provide some answer to the question "what are the relative chances of survival of a child born in the 1st, 2nd, 3rd and subsequent years of marriage?" The difficulty is to find the appropriate form of analysis. An attempt to examine the problem is made in Appendix 5, to which the mathematical reader is referred.

The results alone are of general interest, and may be briefly summarised here. If we represent by a co-efficient k_m, the ratio of the likelihood of survival for a given number of years, of a child born in the m-th year of marriage, to the likelihood of survival for the same number of years of any person,† then if k_m is greater than unity, it is clear that the m-th year of a marriage is a favourable year for a child to be born in; if k_m is less than unity the m-th year is an unfavourable one to be born in.

Year of marriage.	Relative chance of survival of child born in that year of marriage.
1	1·08
2	1·12
3	1·08
4	1·08
5	1·01
6	1·01
7	0·96
8	0·94
9	0·88
10	0·78

The figures in the margin give the relative chance of survival for children born in each of the first ten years of marriage. This, of course, affords only a rough indication of the relative prospects of survival of the firstborn as compared with the laterborn children, but serves to show, if the method of analysis is valid, that it is better to be born in the first six years of marriage than later on.

Section III.—Cousin Marriage.

Contrast between Hindu and Musalman Communities.

139. There is hardly any social phenomenon more striking than the cleavage between the Hindu and Musalman in respect of the custom of inbreeding. Among the latter community inbreeding is almost enjoined as a duty, in the former it is wholly taboo.

The Hindu must marry, unless he has adopted Arya tenets, within his caste; he must marry within his section; but he must not marry within his *gotra* or clan. The Musalman definitely seeks a near relation, a first cousin for preference, as his bride.

Here, if anywhere, is a genetic experiment on a large scale, which ought, one may suppose, to decide the vexed problem of the advantages and disadvantages of cousin marriage. As the two great communities, speaking of the Punjab as a whole, live side by side, eat the same food, follow the same pursuits, and, at any rate among the rural population, which forms nearly 90 per cent. of the whole, are scarcely differentiated at all in respect of house accommodation and environment generally, the material seems admirably adapted to show whether cousin marriage is a eugenic or a dysgenic practice.

Enquiry into percentage of cousin marriage.

140. An essential preliminary is to determine the percentage of cousin marriage among Musalmans, and for this purpose I had a special enquiry carried out by my Personal Assistant, Sheikh Abdul Majid, LL. B., in the districts of Attock, Muzaffargarh and Gurdaspur. He received careful instructions to include all cases, whether the husband and wife were related or not, so as not to exaggerate the percentage of cousin marriage, and these instructions were, I believe, adhered to. In order to prevent mistakes in entering up the relationship of husband and wife, when it existed, a detailed genealogical table was drawn up, and the synopses have been based directly on these genealogies. The total number of cases recorded is 855 for the 3 districts, and the data cover 10 different castes. The data for the Sayad caste alone was recorded in all the three districts.

*I have not access to the literature of the subject at the present time, but if my recollection serves me Professor Pearson found that the firstborn son was more unstable than the laterborn sons both in mental and physical characteristics.

†The general survival rates have been taken from Table P, Life Table, Males, page 187, Census of India Report 1911, Volume I, Part I, drawn up by Mr. Acland.

The summarised results are given in the table below :—

Number and percentage of certain castes who marry relations.

District.	Caste.	Description of wife.	Marrying 1st cousins. Number.	Marrying 1st cousins. Percentage	Marrying Cousins. Number.	Marrying Cousins. Percentage	Total cases.
Attock	Awans	First wife	81	50	108	67	161
		Other wives	2	5	7	19	37
	Maliars	First wife	52	48	68	63	108
		Other wives	0	..	2	18	11
	Qureshis	First wife	1	20	4	80	5
		Other wives	0	..	0	..	0
	Rajputs	First wife	3	20	12	80	15
		Other wives	0	..	1	17	6
	Sayads	First wife	12	80	14	93	15
		Other wives	0	..	3	60	5
		Total District	151	42	219	60	363
Muzaffargarh	Bilochs	First wife	77	41	97	52	188
		Other wives	2	10	8	38	21
	Pathans	First wife	2	9	5	23	22
		Other wives	0	..	1	11	9
	Qureshis	First wife	17	63	17	63	27
		Other wives	0	..	0	..	4
	Sayads	First wife	2	29	2	29	7
		Other wives	0	..	0	..	1
		Total District	100	36	130	47	279
Gurdaspur	Arain	First wife	28	32	36	41	87
		Other wives	1	14	1	14	7
	Gujjars	First wife	4	33	4	33	12
		Other wives	0	—	0	..	5
	Jats	First wife	8	14	12	21	56
		Other wives	1	10	1	10	10
	Rajputs	First wife	7	23	8	27	30
		Other wives	0	..	0	—	1
	Sayads	First wife	0	..	1	20	5
		Other wives	0	..	0	..	0
		Total District	49	23	63	30	213
Total Attock, Muzaffargarh and Gurdaspur Districts			300	35	412	48	855

The above summary does not distinguish between marriages of cousins of other grade than first cousins, and for the detail of marriages between first cousins once removed, second cousins and so forth Subsidiary Tables IX-A, IX-B, IX-C and IX-D should be consulted.

Of the 3 districts Attock and Muzaffargarh are distinctively Musalman districts, while Gurdaspur contains exactly 50 per cent. of Musalmans. The variation of the percentage of cousin marriage among Musalmans with the variation in the *proportion* of Musalmans in the population of the district is very remarkable. The figures are these—

District.	Percentage of Musalmans who marry		Percentage of Musalmans to total population of district.
	First Cousins.	Cousins.	
Attock	42	60	91
Muzaffargarh	30	47	87
Gurdaspur	23	30	50

The conclusion is most strongly suggested that in districts where there are relatively fewer Musalmans, their natural preference for marriage with a near relative is modified by contact with the exogamous Hindu. The converse proposition, however, is not true, as may be noted in the Muzaffargarh district, where though there is no less than 81 per cent. of Musalmans, the Hindu population recorded no single instance of a cousin marriage from among 203 cases into which enquiry was made. In the Attock district, from among Khatris, no cousin marriages were observed, though marriage within the section, as well as within the caste, is practically universal. Of the 3 sections of Khatris, the Khokharan, Bâhri and Bunjahi, the first named is a purely endogamous section, but the last two are reported now to be inclined to inter-marry one with the other. We may conclude, therefore, that Hindus are uninfluenced in the direction of cousin marriage, or of any kind of endogamy, by their Musalman neighbours. *

* Since the above chapter was written the following data have been obtained for the Delhi Province in which there is 29 per cent. of Musalmans.

Number and percentage of certain Musalman castes who marry relations.

DELHI PROVINCE.

Caste.	Description of wives.	Marrying first cousins.		Marrying cousins.		Total cases
		Number.	Percentage.	Number.	Percentage.	
Jats	First wife	0	0	0	0	40
	Other wives	0	0	0	0	6
Meos	First wife	3	6	3	6	51
(Mewatis)	Other wives	0	0	0	0	18
Pathans	First wife	3	7	5	12	41
	Other wives	0	0	1	9	11
Sayads	First wife	7	14	15	30	50
	Other wives	2	17	2	17	12
	Total ..	15	7	26	11	229

The absence of cousin marriage among Jats and its rarity among Meos are not surprising in view of the fact that both castes are converted from Hinduism.

Pathans in Delhi are less inclined to marry cousins (12%) than they are in Muzaffargarh (38%:) while Sayads in Delhi marry 30 per cent. of cousins as against 93 per cent. in Attock and 29 per cent. in Muzaffargarh.

141. Lastly, among Musalmans it is much more likely that the first wife will be a cousin than the second or later wives. This is to be attributed to the greater social importance of, and the closer observance of custom demanded from a first marriage than from a second. In the first marriage the man follows the dictates of the tribe, in the later marriages he pleases himself.

Tendency to marry cousins most marked for first marriages.

I. Distribution by Civil Condition of 1,000 of each sex, religion and main age-period of last five censuses, Punjab and and Delhi. III. Distribution by main age-periods and Civil Condition of 10,000 of each sex and religion, Punjab and Delhi. IV. tion of 1,000 of each sex at certain ages for selected castes, Punjab and Delhi. VI, VI (1), VI (2), VI (3), VI (4), VI (5), VI (6). Each slip corresponds to one marriage. VII-A. Statement showing gross fertility for male and female children born alive and female children now living for varying durations of marriage for caste groups. VIII-A. Statement showing the observed and VIII-B. Statment showing the observed and calculated average net fertility (*i. e.*, for children living) for varying dura- Attock District, IX-B. Relationship of husband and wife (Musalmans), Muzaffargarh District. IX-C. Relationship of hus rised dates of Hindu marriages for the Punjab, 1910—1921, as given by Pandit Devi Dial Jotshi

SUBSIDIARY

Distribution by Civil Condition of 1,000 of each sex, religion and

Religion and age.	Male.														
	Unmarried.					*Married.*					*Widowed.*				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ALL RELIGIONS.															
Under 5	999	999	999	998	992	1	1	1	1	8	..	..	..	1	..
5—9 (inclusive) ..	986	986	989	975		13	13	11	24		1	1	..	1	
10—14 „ ..	923	911	911	845	882	73	84	87	151	115	4	5	2	4	3
15—19 „ ..	722	706	699	678	654	263	275	290	404	334	15	19	11	18	12
20—39 „ ..	259	261	252	196	251	660	661	695	738	697	81	78	53	66	52
40—59 „ ..	77	77	79	74	90	708	718	767	725	753	215	205	154	201	157
60 and over ..	56	63	62	64	70	541	535	587	541	592	403	402	351	395	338
HINDU.															
Under 5	998	998	999	998	988	2	2	1	2	12	..	..	..	..	..
5—9 (inclusive) ..	976	978	983	964		22	21	16	35		2	1	1	1	
10—14 „ ..	880	874	875	795	845	113	119	122	200	151	7	7	3	5	4
15—19 „ ..	649	640	629	525	603	330	336	357	455	381	21	24	14	20	16
20—39 „ ..	232	240	238	194	245	674	673	701	734	695	94	87	61	72	60
40—59 „ ..	88	91	98	92	106	670	683	728	688	717	242	226	174	220	177
60 and over ..	71	76	80	82	87	502	508	550	507	558	427	416	370	411	355
MUSALMAN.															
Under 5	999	1,000	1,000	999	995	1	..	..	1	5	..	..	..	..	..
5—9 (inclusive) ..	991	990	993	985		8	9	7	14		1	1	..	1	
10—14 „ ..	948	936	944	898	919	50	61	55	99	79	2	3	1	3	2
15—19 „ ..	776	759	769	636	710	213	228	223	349	281	11	13	8	15	9
20—39 „ ..	263	264	257	188	249	664	667	695	753	706	73	69	48	59	45
40—59 „ ..	57	56	54	49	66	752	761	810	769	796	191	183	136	182	138
60 and over ..	38	45	40	41	51	581	572	625	581	629	381	383	335	378	320
CHRISTIAN.															
Under 5	1,000	999	1,000	998	998	..	1	..	1	2	..	..	..	1	..
5—9 (inclusive) ..	990	994	995	987		9	5	5	8		1	1	..	5	
10—14 „	958	955	966	954	966	40	42	33	44	34	2	3	1	2	..
15—19 „ ..	793	782	849	816	921	195	205	145	172	76	12	13	6	12	3
20—39 „ ..	332	492	718	765	825	603	465	267	221	162	65	43	15	14	13
40—59 „	45	58	70	88	177	762	768	821	780	714	193	174	109	132	109
60 and over ..	29	38	31	29	87	597	581	650	640	558	374	381	319	331	355
JAIN.															
Under 5	998	999	1,000	998	990	2	1	..	2	10	..	..	..	..	..
5—9 (inclusive) ..	992	974	990	974		6	24	9	25		2	2	1	1	
10—14 „ ..	915	888	829	684	768	80	103	169	312	230	5	9	2	4	2
15—19 „ ..	593	543	464	403	435	388	428	521	565	540	19	29	15	32	25
20—39 „ ..	234	244	231	193	205	652	633	680	694	700	114	123	89	113	95
40—59 „ ..	122	125	123	115	120	553	558	602	566	614	325	317	275	319	266
60 and over ..	91	107	103	84	108	356	332	404	331	395	553	561	493	585	497
SIKH.															
Under 5	1,000	1,000	1,000	995	992	..	..	..	1	8	..	..	..	4	..
5—9 (inclusive) ..	994	988	992	970		6	11	8	24		..	1	..	6	
10—14 „ ..	934	915	907	822	873	63	78	91	168	125	3	7	2	10	2
15—19 „ ..	731	717	676	551	636	258	263	314	422	354	11	20	10	27	10
20—39 „ ..	317	292	267	212	267	606	616	686	711	685	77	92	47	77	48
40—59 „ ..	125	115	111	111	125	649	654	743	685	720	226	231	146	204	155
60 and over ..	90	101	98	99	100	483	460	546	484	546	427	430	356	417	354

Delhi. II. Distribution by Civil Condition of 1,000 of each sex at certain ages in each Religion and Natural Division, Punjab Proportion of the sexes by Civil Condition at certain ages for Religions and Natural Divisions. V. Distribution by Civil Condi- Showing the data collected from the Family Census, Punjab, 1920-21, for marriages for which both husband and wife were alive. for varying duration of marriage for caste groups (Punjab Census 1921). VII-B. Statement showing net fertility for male calculated average gross fertility (*i. e.*, for all children born alive) for varying durations of marriage for different caste groups. tions of marriage for different caste groups (Punjab Census 1921). IX-A. Relationship of husband and wife (Musalmans), band and wife (Musalmans), Gurdaspur District. IX-D. Relationship of husband and wife (Musalmans), Delhi Province. X.—Autho-

TABLE I.

main age—period of last five Censuses, Punjab and Delhi.

Female.														
Unmarried.					*Married.*					*Widowed.*				
1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
998	999	999	997	974	2	1	1	3	26	..	..	..	..	..
959	957	963	925		40	41	36	73		1	2	1	2	
744	706	713	532	632	251	287	283	459	362	5	7	4	9	6
227	203	227	92	157	753	773	755	879	821	20	24	18	29	22
20	20	19	10	14	890	882	896	857	888	90	98	85	133	98
7	8	5	5	5	615	585	608	482	583	378	407	387	513	412
7	11	4	5	5	241	221	217	183	209	752	768	779	812	786
997	998	998	996	962	3	2	2	4	37	..	..	..	..	1
930	934	944	892		68	63	55	106		2	3	1	2	
630	598	609	399	532	362	392	385	591	459	8	10	6	10	9
124	110	121	39	87	848	856	855	928	884	28	34	24	33	29
9	10	8	4	7	874	863	887	839	874	117	127	105	157	119
4	5	2	3	2	553	525	565	434	537	443	470	433	563	461
4	7	2	3	2	195	179	184	148	181	801	814	814	849	817
999	999	999	998	983	1	1	1	2	17	..	..	..	..	..
974	970	978	952		25	28	22	47		1	2	..	1	
811	779	802	662	721	185	216	195	332	275	4	5	3	6	4
305	281	327	146	227	680	702	661	832	757	15	17	12	22	16
30	28	30	15	21	896	895	899	874	897	74	77	71	111	82
11	11	7	6	7	649	627	637	518	618	340	362	356	476	375
10	13	6	6	7	268	246	239	205	229	722	741	755	789	764
999	999	999	999	997	1	1	1	1	3	..	..	..	..	..
978	983	994	982		21	15	6	16		1	2	..	2	
860	841	877	835	971	138	156	122	164	27	2	3	1	1	2
333	423	507	431	692	656	564	482	559	305	11	13	11	10	3
50	93	124	121	120	897	845	833	822	826	53	62	43	57	54
21	34	55	56	38	695	693	657	613	652	284	273	288	331	310
18	24	33	21	14	315	343	277	274	233	667	633	690	705	753
1,000	997	999	996	987	..	2	1	4	13	..	1	..	..	..
982	980	979	957		16	15	20	42		2	5	1	1	
799	740	677	466	584	194	243	318	524	407	7	17	5	10	9
143	123	91	31	80	816	814	881	918	888	41	63	28	51	32
7	12	6	4	8	806	770	860	798	844	187	218	134	198	148
4	11	3	2	4	466	456	538	415	501	530	533	459	583	495
7	13	6	2	5	176	172	159	119	180	817	815	835	879	815
999	999	999	994	978	1	1	1	3	22	..	..	..	3	..
975	965	970	924		24	32	29	69		1	3	1	7	
776	703	704	507	627	221	289	293	471	368	3	8	3	22	5
207	171	189	55	129	780	807	798	895	854	13	22	13	50	17
8	12	8	5	8	917	894	923	859	914	75	94	69	136	78
2	5	2	6	2	652	594	663	532	634	346	401	335	462	364
3	7	2	7	2	256	235	244	216	244	741	758	754	777	754

SUBSIDIARY TABLE I.—*concluded.*

Distribution by Civil Condition of 1,000 of each sex, religion and main age-period of 1921.

Religion and Age.	Punjab.						Delhi.					
	Male.			*Female.*			*Male.*			*Female.*		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13
ALL RELIGIONS.												
Under 5	999	1	..	998	2	..	999	1	..	999	1	..
5—9 (inclusive)	980	13	1	959	40	1	980	19	1	945	53	2
10—14 "	924	72	4	746	249	5	850	142	8	609	385	6
15—19 "	725	260	15	230	751	19	588	384	28	94	885	21
20—39 "	261	658	81	20	890	90	190	714	96	16	900	84
40—59 "	78	708	214	7	616	377	50	718	232	8	553	439
60 and over	56	541	403	7	242	751	39	516	445	10	214	776
HINDU.												
Under 5	998	2	..	997	3	..	999	1	..	999	1	..
5—9 (inclusive)	976	22	2	930	68	2	976	22	2	939	60	1
10—14 "	882	111	7	633	359	8	823	168	9	542	451	7
15—19 "	654	325	21	127	845	28	530	438	32	53	924	23
20—39 "	235	671	94	9	872	119	163	727	110	8	899	93
40—59 "	80	670	241	4	554	442	55	676	269	4	525	471
60 and over	71	504	425	4	195	801	45	463	492	7	192	801
MUSALMAN.												
Under 5	999	1	..	999	1	..	1,000	..	..	998	2	..
5—9 (inclusive)	991	8	1	974	25	1	990	10	..	960	38	2
10—14 "	948	50	2	812	185	3	919	78	3	747	249	4
15—19 "	776	213	11	307	678	15	723	259	18	169	814	17
20—39 "	264	663	73	30	896	74	204	725	71	20	920	60
40—59 "	57	751	192	10	650	340	34	810	156	11	614	375
60 and over	38	581	381	10	268	722	26	626	348	15	261	724
CHRISTIAN.												
Under 5	1,000	..	..	999	1	..	997	3	..	999	1	..
5—9 (inclusive)	991	8	1	980	19	1	946	54	..	915	85	..
10—14 "	964	34	2	868	130	2	709	279	12	592	404	4
15—19 "	800	188	12	331	658	11	619	347	34	373	620	7
20—39 "	317	615	68	44	904	52	530	441	29	173	763	64
40—59 "	43	763	194	19	699	282	101	754	145	79	588	333
60 and over	29	597	374	18	315	667	30	583	387	65	290	645
JAIN.												
Under 5	998	2	..	1,000	..	..	996	4	..	1,000	..	..
5—9 (inclusive)	991	7	2	984	15	1	996	4	..	966	23	11
10—14 "	917	78	5	806	187	7	899	98	3	697	296	7
15—19 "	590	392	18	152	810	38	617	361	22	61	868	71
20—39 "	241	644	115	8	805	187	180	708	112	4	815	181
40—59 "	127	548	325	4	465	531	87	590	323	3	474	523
60 and over	94	351	555	7	172	821	66	394	540	10	211	779
SIKH.												
Under 5	1,000	..	..	999	1	..	1,000	..	..	1,000	..	..
5—9 (inclusive)	994	6	..	975	24	1	984	16	..	981	19	..
10—14 "	934	63	3	776	221	3	879	114	7	900	100	..
15—19 "	731	258	11	207	780	13	699	269	32	164	823	13
20—39 "	317	606	77	8	917	75	251	686	63	26	942	32
40—59 "	125	649	226	2	652	346	35	826	139	..	663	337
60 and over	90	483	427	3	256	741	42	583	375	48	238	714

SUBSIDIARY TABLE II.

Distribution by Civil Condition of 1,000 of each sex at certain ages in each Religion and Natural Division.—Punjab.

Religion and Natural Division.	MALES.																	
	All Ages.			0—4 (inclusive).			5—9 (inclusive).			10—14 (inclusive).			15—39 (inclusive.)			40 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PUNJAB.																		
All Religions	537	375	88	999	1	..	986	13	1	924	72	4	366	568	66	71	658	271
Hindu	509	392	99	998	2	..	976	22	2	882	111	7	331	592	77	84	623	293
Musalman	551	370	79	999	1	..	991	8	1	948	50	2	379	562	59	51	699	250
Christian	582	347	71	1,000	..	..	991	8	1	964	34	2	427	518	55	38	711	251
Jain	520	358	122	998	2	..	991	7	2	917	78	5	320	587	93	120	503	377
Sikh	553	352	95	1,000	..	..	994	6	..	934	63	3	416	523	61	114	597	289
INDO-GANGETIC PLAIN WEST.																		
All Religions	527	375	98	999	1	..	982	16	2	900	95	5	347	579	74	80	615	305
Hindu	508	386	106	999	1	..	973	25	2	855	137	8	308	606	86	87	587	326
Musalman	532	378	90	999	1	..	987	12	1	929	68	3	351	581	68	50	662	288
Christian	563	361	76	999	1	..	985	14	1	939	58	3	384	553	63	33	705	262
Jain	513	362	125	997	3	..	992	7	1	903	92	5	303	599	98	114	500	386
Sikh	554	348	98	1,000	..	..	994	5	1	938	60	2	422	515	63	118	584	298
HIMALAYAN.																		
All Religions	478	439	83	995	5	..	970	28	2	898	97	5	338	601	61	66	715	219
Hindu	480	438	82	995	5	..	970	28	2	898	97	5	337	602	61	75	709	216
Musalman	471	438	91	998	2	..	972	26	2	881	115	4	335	600	65	70	678	252
Christian	578	386	36	1,000	..	..	1,000	..	..	980	20	..	543	443	14	121	751	128
Jain	429	488	83	1,000	..	..	1,000	..	..	857	143	..	364	617	19	197	561	242
Sikh	439	469	92	1,000	..	..	967	31	2	855	143	2	305	633	62	84	655	261
SUB-HIMALAYAN.																		
All Religions	540	368	92	1,000	..	..	990	9	1	938	59	3	381	556	63	71	650	279
Hindu	521	372	107	999	1	..	983	14	3	915	80	5	369	557	74	91	598	311
Musalman	544	371	85	1,000	..	..	991	8	1	948	50	2	376	565	59	48	688	264
Christian	599	330	71	1,000	..	..	997	3	..	980	19	1	483	467	50	46	696	258
Jain	559	329	112	1,000	..	..	988	6	6	988	5	7	395	530	75	141	508	351
Sikh	548	352	100	1,000	..	..	992	8	..	931	64	5	419	522	59	119	587	294
NORTH-WEST DRY AREA.																		
All Religions	570	365	65	999	1	..	994	5	1	961	37	2	401	548	51	57	732	211
Hindu	544	380	76	999	1	..	989	10	1	943	52	5	373	567	60	72	687	241
Musalman	576	361	63	999	1	..	995	5		968	31	1	409	541	50	54	741	205
Christian	594	345	61	1,000	..	..	996	4		985	14	1	402	546	52	32	747	221
Jain	508	395	97	1,000	..	..	978	22	..	969	31	..	331	591	78	102	594	304
Sikh	559	376	65	1,000	..	..	993	6	1	920	78	2	374	578	48	74	711	215
	FEMALES.																	
PUNJAB.																		
All Religions	403	463	134	998	2	..	959	40	1	746	249	5	65	860	75	7	511	482
Hindu	365	477	158	997	3	..	930	68	2	633	359	8	35	867	98	4	456	540
Musalman	430	451	119	999	1	..	974	25	1	812	185	3	88	850	62	10	542	448
Christian	476	435	89	999	1	..	980	19	1	868	130	2	109	848	43	19	594	387
Jain	389	424	187	1,000	..	..	984	15	1	806	187	7	41	806	153	4	397	599
Sikh	389	475	136	999	1	..	975	24	1	776	221	3	51	888	61	3	533	464
INDO-GANGETIC PLAIN WEST.																		
All Religions	394	468	138	998	2	..	951	48	1	707	288	5	49	873	78	4	499	497
Hindu	373	477	150	997	3	..	929	69	2	608	385	7	27	878	95	2	465	533
Musalman	419	456	125	999	1	..	962	37	1	772	224	4	71	863	66	7	520	473
Christian	456	450	94	998	2	..	969	30	1	829	169	2	102	851	47	16	578	406
Jain	386	424	190	1,000	..	..	984	16	..	784	208	8	39	804	157	3	395	602
Sikh	385	474	141	999	1	..	976	23	1	785	213	2	51	887	62	2	526	472
HIMALAYAN.																		
All Religions	323	502	175	996	4	..	900	97	3	610	379	11	44	852	104	6	440	554
Hindu	320	503	177	996	4	..	900	97	3	610	379	11	40	854	106	5	437	558
Musalman	369	501	130	997	3	..	895	102	3	585	404	11	64	865	71	5	493	502
Christian	611	320	69	996	4	..	997	3	..	997	3	..	452	524	24	235	476	289
Jain	302	468	230	1,000	..	..	1,000	..	..	818	182	..	16	905	79	..	182	818
Sikh	330	535	135	991	7	2	922	78	..	453	540	7	23	906	71	2	472	526
SUB-HIMALAYAN.																		
All Religions	395	463	142	999	1	..	963	36	1	752	243	5	64	861	75	7	508	485
Hindu	361	468	171	998	2	..	941	57	2	655	337	8	36	861	103	4	445	551
Musalman	410	459	131	999	1	..	971	28	1	790	205	5	77	857	66	8	530	462
Christian	478	430	92	1,000	..	..	986	13	1	889	108	3	110	848	42	16	599	385
Jain	411	416	173	1,000	..	..	987	11	2	920	77	3	56	814	130	12	413	575
Sikh	373	485	142	999	1	..	965	33	2	732	263	5	43	891	66	3	529	468
NORTH-WEST DRY AREA.																		
All Religions	451	441	108	999	1	..	984	15	1	852	146	2	102	838	60	14	561	425
Hindu	420	442	138	998	2	..	970	29	1	775	220	5	64	843	93	9	475	516
Musalman	457	439	104	999	1	..	987	12	1	870	128	2	112	834	54	15	573	412
Christian	503	423	74	999	1	..	993	7	..	889	109	2	89	874	37	10	632	358
Jain	371	453	176	1,000	..	..	971	29	..	607	357	36	31	794	175	..	479	521
Sikh	439	465	96	999	1	..	981	18	1	795	203	2	61	886	53	4	607	389

SUBSIDIARY TABLE II.—*concluded.*

Distribution by Civil Condition of 1,000 of each Sex at certain ages in each Religion and Natural Division—Delhi.

Religion and Natural Division.	MALES.																	
	All Ages.			0—4 (inclusive.)			5—9 (inclusive.)			10—14 (inclusive.)			15—39 (inclusive.)			40 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
INDO-GANGETIC PLAIN WEST.																		
All Religions ..	438	464	98	999	1	..	980	19	1	851	142	7	272	646	82	47	677	276
Hindu	422	467	111	999	1	..	976	22	2	823	168	9	241	666	93	53	632	315
Musalman	464	464	72	1,000	..	..	990	10	..	919	78	3	313	627	60	32	771	197
Christian	565	388	47	997	3	..	946	54	..	709	279	12	543	427	30	89	725	186
Jain	439	427	134	996	4	..	996	4	..	899	98	3	267	639	94	82	550	368
Sikh	397	537	66	1,000	..	..	984	16	..	879	114	7	316	625	59	36	788	176
	FEMALES.																	
INDO-GANGETIC PLAIN WEST.																		
All Religions ..	346	521	133	999	1	..	945	53	2	609	385	6	33	897	70	8	477	515
Hindu	327	530	143	999	1	..	939	60	1	542	451	7	18	904	78	4	450	546
Musalman	383	505	112	998	2	..	960	38	2	747	249	4	51	898	51	12	537	451
Christian	430	483	87	999	1	..	915	85	..	592	404	4	216	732	52	76	535	389
Jain	314	484	202	1,000	..	..	966	23	11	697	296	7	16	827	157	4	416	580
Sikh	391	540	69	1,000	..	..	981	19	..	900	100	..	54	918	28	9	580	411

SUBSIDIARY TABLE III.

Distribution by main age-periods and Civil Condition of 10,000 of each Sex and Religion.

Religion and age.	Males. Unmarried.	Males. Married.	Males. Widowed.	Females. Unmarried.	Females. Married.	Females. Widowed.
1	2	3	4	5	6	7
PUNJAB.						
ALL RELIGIONS.						
All Ages	5,370	3,752	878	4,029	4,627	1,344
0—9 (inclusive)	2,708	19	2	2,951	64	2
10—14 "	1,124	88	5	824	275	5
15—39 "	1,373	2,126	246	239	3,165	276
40 and over	165	1,519	625	15	1,123	1,061
HINDU.						
All Ages	5,087	3,922	991	3,651	4,772	1,577
0—9 (inclusive)	2,559	33	3	2,817	105	3
10—14 "	1,046	132	8	694	394	9
15—39 "	1,286	2,306	299	132	3,265	371
40 and over	196	1,451	681	8	1,008	1,194
MUSALMAN.						
All Ages	5,514	3,702	784	4,302	4,507	1,191
0—9 (inclusive)	2,846	13	1	3,061	42	2
10—14 "	1,174	61	2	898	204	4
15—39 "	1,379	2,046	214	321	3,101	225
40 and over	115	1,582	567	22	1,160	960
CHRISTIAN.						
All Ages	5,825	3,467	708	4,760	4,352	888
0—9 (inclusive)	2,901	12	..	3,327	33	2
10—14 "	1,185	41	3	1,007	151	3
15—39 "	1,663	2,021	214	390	3,049	154
40 and over	76	1,393	491	36	1,119	729
JAIN.						
All Ages	5,199	3,581	1,220	3,888	4,237	1,875
0—9 (inclusive)	2,554	12	3	2,794	22	1
10—14 "	1,095	93	6	923	214	8
15—39 "	1,284	2,355	373	162	3,160	599
40 and over	266	1,121	838	9	841	1,267
SIKH.						
All Ages	5,534	3,519	947	3,885	4,754	1,361
0—9 (inclusive)	2,559	8	1	2,832	36	2
10—14 "	1,139	77	3	866	247	3
15—39 "	1,555	1,958	228	181	3,164	219
40 and over	281	1,476	715	6	1,307	1,137

SUBSIDIARY TABLE III.

Distribution by main age-periods and Civil Condition of 10,000 of each Sex and Religion—*concluded.*

Religion and age.	Males.			Females.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7
DELHI.						
ALL RELIGIONS.						
ALL AGES	4,382	4,639	979	3,459	5,214	1,827
0—9 (inclusive)	2,140	22	2	2,719	75	2
10—14 "	862	144	7	583	368	6
15—39 "	1,279	3,033	384	141	3,825	299
40 and over	101	1,440	586	16	946	1,020
HINDU.						
ALL AGES	4,220	4,666	1,114	3,265	5,304	1,431
0—9 (inclusive)	2,137	26	2	2,671	82	1
10—14 "	835	170	10	507	422	7
15—39 "	1,137	3,144	442	78	3,904	335
40 and over	111	1,326	660	9	896	1,088
MUSALMAN.						
ALL AGES	4,642	4,6[illegible]2	716	3,834	5,051	1,115
0—9 (inclusive)	2,206	12	..	2,846	57	3
10—14 "	960	81	3	757	253	5
15—39 "	1,403	2,812	270	207	3,672	208
40 and over	73	1,737	443	24	1,069	899
CHRISTIAN.						
ALL AGES	5,651	3,883	466	4,296	4,830	874
0—9 (inclusive)	1,780	51	..	2,593	117	..
10—14 "	510	201	9	554	378	4
15—39 "	3,227	2,540	178	1,027	3,480	248
40 and over	134	1,091	279	122	855	622
JAIN.						
ALL AGES	4,389	4,274	1,337	3,140	4,841	2,019
0—9 (inclusive)	2,040	8	..	2,548	29	14
10—14 "	982	107	4	510	216	5
15—39 "	1,161	2,780	409	72	3,663	697
40 and over	206	1,379	924	10	933	1,303
SIKH.						
ALL AGES	3,968	5,371	661	3,910	5,401	689
0—9 (inclusive)	1,272	10	..	2,845	25	..
10—14 "	590	76	5	789	88	..
15—39 "	2,050	4,054	381	263	4,511	138
40 and over	56	1,231	275	13	777	551

SUBSIDIARY TABLE IV.

Proportion of the sexes by Civil Condition at certain ages for Religions and Natural Divisions.

Natural Division and Religion.	Number of females per 1,000 males.														
	All ages.			0—9 (*inclusive*).			10—14 (*inclusive*).			15—39 (*inclusive*).			40 *and over.*		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PUNJAB.															
All Religions ..	621	1,021	1,268	902	2,697	888	607	2,588	983	144	1,233	928	79	612	1,405
Hindu ..	595	1,009	1,318	913	2,675	690	549	2,468	885	85	1,174	1,029	35	576	1,453
Musalman ..	659	1,028	1,282	908	2,656	1,177	646	2,810	1,275	197	1,280	889	163	619	1,430
Christian ..	612	987	985	902	2,110	1,278	668	2,854	809	185	1,186	566	371	632	1,169
Jain ..	643	1,017	1,321	940	1,615	333	725	1,985	1,143	109	1,153	1,380	29	645	1,299
Sikh ..	537	1,033	1,104	846	3,290	1,880	581	2,452	731	89	1,236	735	16	677	1,215
INDO-GANGETIC PLAIN WEST.															
All Religions ..	602	1,005	1,130	895	2,528	813	583	2,254	781	108	1,155	796	42	635	1,272
Hindu ..	594	1,000	1,135	900	2,411	631	533	2,109	689	66	1,108	848	21	619	1,278
Musalman ..	651	998	1,152	918	2,636	1,136	632	2,488	1,041	160	1,177	773	115	623	1,305
Christian ..	644	992	984	882	1,869	833	615	2,053	452	206	1,193	583	381	619	1,175
Jain ..	657	1,025	1,330	956	1,636	333	708	1,840	1,273	110	1,149	1,375	20	664	1,312
Sikh ..	525	1,030	1,083	837	3,374	1,729	580	2,445	757	87	1,223	693	13	687	1,209
HIMALAYAN.															
All Religions ..	613	1,036	1,913	961	3,069	1,003	563	3,225	1,740	122	1,333	1,589	81	500	2,054
Hindu ..	609	1,049	1,966	961	3,053	989	562	3,258	1,711	115	1,356	1,646	51	502	2,106
Musalman ..	576	843	1,054	924	3,561	1,250	540	2,849	2,588	132	985	740	44	431	1,183
Christian ..	1,173	923	2,132	1,286	*2,000	..	1,687	250	..	824	1,169	1,714	1,898	622	2,226
Jain ..	452	613	1,778	1,391	..	..	500	667	..	26	864	2,500	..	162	1,687
Sikh ..	521	792	1,017	990	2,600	1,000	366	2,609	2,000	47	889	713	11	413	1,151
SUB-HIMALAYAN.															
All Religions ..	623	1,072	1,314	906	3,365	972	615	3,175	1,263	144	1,328	1,020	75	636	1,414
Hindu ..	569	1,036	1,318	901	3,498	547	548	3,223	1,110	78	1,230	1,103	36	589	1,402
Musalman ..	663	1,089	1,357	915	3,230	1,398	646	3,176	1,645	187	1,379	1,012	144	648	1,469
Christian ..	610	997	983	912	3,963	4,000	701	4,411	1,500	149	1,192	558	267	662	1,146
Jain ..	600	1,032	1,254	863	1,667	333	828	14,500	333	113	1,236	1,393	65	605	1,221
Sikh ..	537	1,089	1,133	862	3,565	2,952	564	2,931	688	80	1,328	864	20	685	1,210
NORTH-WEST DRY AREA.															
All Religions ..	654	999	1,378	898	2,182	942	651	2,903	996	212	1,276	971	185	588	1,547
Hindu ..	618	932	1,457	924	2,471	826	615	3,137	662	129	1,123	1,157	91	521	1,612
Musalman ..	663	1,014	1,382	895	2,067	1,000	659	3,007	1,293	234	1,319	941	221	598	1,558
Christian ..	665	963	957	910	1,720	333	671	5,957	1,500	162	1,165	516	236	607	1,162
Jain ..	529	828	1,303	855	1,000	..	548	10,000	*1,000	59	846	1,417	..	561	1,190
Sikh ..	615	969	1,167	874	2,453	1,187	619	1,863	698	127	1,184	841	41	608	1,293
DELHI.															
INDO-GANGETIC PLAIN WEST.															
All Religions ..	579	824	994	932	2,468	1,075	496	1,874	591	81	925	571	118	482	1,277
Hindu ..	570	838	947	921	2,342	579	448	1,826	525	50	915	559	59	498	1,215
Musalman ..	608	801	1,146	949	3,465	9,000	579	2,285	1,227	109	961	568	244	453	1,492
Christian ..	519	848	1,279	994	1,575	..	740	1,283	286	217	934	950	623	535	1,520
Jain ..	568	900	1,200	993	3,000	*3,000	412	1,607	1,000	49	1,047	1,355	37	537	1,120
Sikh ..	400	408	423	908	1,000	..	543	467	..	52	452	147	91	256	815

* No males in these age-periods.

SUBSIDIARY

Distribution by Civil Condition of 1,000 of each

Caste.	DISTRIBUTION OF 1,000 OF EACH SEX — Males. All ages. Unmarried.	All ages. Married.	All ages. Widowed.	0—4 (*inclusive*). Unmarried.	0—4 Married.	0—4 Widowed.	5—11 (*inclusive*). Unmarried.	5—11 Married.	5—11 Widowed.	12—19 (*inclusive*). Unmarried.	12—19 Married.	12—19 Widowed.	20—39 (*inclusive*). Unmarried.	20—39 Married.	20—39 Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PUNJAB.															
1. Aggarwal H.	529	351	120	999	1	0	980	17	3	679	304	17	274	611	115
2. Ahir H.	497	383	120	999	1	0	980	18	2	686	297	17	195	686	119
3. Arain M.	532	381	87	999	1	0	979	20	1	802	192	6	228	691	81
4. Arora H.	547	372	81	999	1	0	992	7	1	867	125	8	268	660	72
5. Arora S.	562	366	72	1,000	0	0	992	7	1	847	147	6	241	699	60
6. Awan M.	564	370	66	1,000	0	0	993	6	1	904	91	5	271	668	61
7. Barwala M.	541	364	95	1,000	0	0	992	8	0	802	188	10	215	685	100
8. Bawaria H.	554	373	73	1,000	0	0	987	10	3	798	185	17	188	732	80
9. Bharai M.	531	371	98	1,000	0	0	968	31	1	785	205	10	236	672	92
10. Biloch M.	560	378	62	999	1	0	993	7	0	875	117	8	279	656	65
11. Brahman H.	532	352	116	999	1	0	985	13	2	807	179	14	317	581	102
12. Chamar H.	471	432	97	999	1	0	935	62	3	571	410	19	139	756	105
13. Chamar S.	498	397	105	1,000	0	0	965	34	1	689	298	13	189	707	104
14. Chhimba H.	490	380	130	998	2	0	961	36	3	737	241	22	235	653	112
15. Chhimba S.	530	351	116	1,000	0	0	990	10	0	801	188	11	285	622	93
16. Chhimba M.	533	377	90	999	1	0	976	23	1	797	196	7	203	704	93
17. Chuhra H.	548	369	83	999	1	0	973	25	2	797	190	13	197	715	88
18. Chuhra S.	552	369	79	1,000	0	0	989	10	1	808	184	8	192	726	82
19. Dagi and Koli H.	427	504	69	988	12	0	938	59	3	539	445	16	157	767	76
20. Dhanak H.	409	495	96	992	8	0	784	206	10	406	564	30	70	824	106
21. Dhobi M.	528	386	86	1,000	0	0	982	17	1	827	166	7	232	688	80
22. Dogar M.	564	348	88	1.000	0	0	986	13	1	832	160	8	296	623	81
23. Faqir M.	526	371	103	999	1	0	968	30	2	762	226	12	234	671	95
24. Girth H.	535	378	87	1,000	0	0	997	1	2	900	93	7	223	685	92
25. Gujjar H.	501	395	104	999	1	0	949	48	3	714	266	20	242	659	99
26. Gujjar M.	520	387	93	999	1	0	968	31	1	788	202	10	247	675	78
27. Harni M.	558	351	91	1,000	0	0	992	8	0	850	130	20	268	668	64
28. Jat H.	502	383	115	998	2	0	934	61	5	634	345	21	242	645	113
29. Jat S.	562	341	97	1,000	0	0	988	11	1	821	172	7	361	566	73
30. Jat M.	574	353	73	1,000	0	0	992	8	0	890	105	5	314	621	65
31. Jhiwar H.	506	380	114	999	1	0	975	22	3	756	226	18	208	678	114
32. Jhiwar S.	532	367	101	1,000	0	0	981	19	0	800	192	8	221	678	101
33. Jhiwar M.	530	368	102	1,000	0	0	976	23	1	791	197	12	205	698	97
34. Julaha H.	458	449	93	997	3	0	972	26	2	731	250	19	194	719	87
35. Julaha M.	541	367	92	999	1	0	989	10	1	855	136	9	238	674	88
36. Kamboh S.	523	399	78	1,000	0	0	986	14	0	742	248	10	222	709	69
37. Kamboh M.	541	371	88	999	1	0	985	14	1	804	186	10	202	713	85
38. Kanet H.	436	491	73	987	13	0	929	67	4	716	272	12	198	734	68
39. Kashmiri M.	536	384	80	1.000	0	0	994	6	0	873	121	6	237	687	76
40. Khatri H.	551	369	80	1,000	0	0	992	7	1	897	95	8	304	635	61
41. Khatri S.	557	364	79	1,000	0	0	994	6	0	879	114	7	292	643	65
42. Khoja M.	556	376	68	999	1	0	994	6	0	846	144	10	224	708	68
43. Khokhar M.	583	349	68	1,000	0	0	997	3	0	901	93	6	341	597	62
44. Kumhar H.	482	416	102	999	1	0	969	28	3	687	299	14	166	729	105
45. Kumhar M.	543	371	86	999	1	0	986	13	1	802	194	4	217	679	104
46. Lohar H.	487	410	103	998	2	0	968	30	2	746	240	14	212	683	105
47. Lohar M.	542	379	79	999	1	0	986	13	1	807	184	9	217	703	80
48. Machhi M.	555	364	81	999	1	0	983	17	0	807	187	6	259	654	87
49. Mahtam S.	611	340	49	999	1	0	996	4	0	924	73	3	242	713	45
50. Mali H.	480	401	119	998	2	0	972	25	3	697	286	17	164	725	111
51. Maliar M.	573	351	76	1,000	0	0	995	4	1	918	78	4	263	662	76
52. Mallah M.	582	348	70	1,000	0	0	995	5	0	899	98	3	291	638	71
53. Meo M.	518	386	96	1,000	0	0	990	10	0	774	210	16	146	741	113

TABLE V.

sex at certain ages for selected castes.

AND AGE BY CIVIL CONDITION.

40 *and over.*			Females. All *ages.*			0—4 (*inclusive*).			5—11 (*inclusive*).			12—19 (*inclusive*).			20—39 (*inclusive*).			40 *and over.*		
Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
132	494	374	376	419	205	998	2	0	961	37	2	318	648	34	6	780	214	3	372	625
73	570	357	368	484	148	999	1	0	920	78	2	209	776	15	2	891	107	0	483	517
48	671	281	427	407	106	999	1	0	942	57	1	465	526	9	27	907	66	8	581	411
71	670	259	403	434	163	998	2	0	966	33	1	455	522	23	21	845	134	10	437	553
79	681	240	422	444	134	999	1	0	973	26	1	469	520	11	13	882	105	4	515	481
41	746	213	419	448	133	1,000	0	0	977	22	1	543	446	11	42	880	78	10	518	472
41	657	302	441	450	109	1,000	0	0	961	39	0	467	522	11	12	917	71	3	571	426
28	740	232	454	452	94	1,000	0	0	962	34	4	422	565	13	11	924	65	6	604	390
58	641	301	394	477	129	998	2	0	895	103	2	372	612	16	21	912	67	9	516	475
45	768	187	427	471	102	999	1	0	978	21	1	531	460	9	26	917	57	12	607	381
130	548	322	346	432	222	1,000	0	0	922	75	3	326	637	37	8	788	204	3	371	626
39	653	308	360	517	123	999	1	0	825	172	3	197	785	18	4	914	82	2	518	480
49	634	317	393	494	113	1,000	0	0	910	89	1	313	676	11	4	944	52	2	548	450
86	565	349	365	491	144	997	3	0	904	93	3	293	691	16	6	899	95	4	495	501
95	572	333	397	470	133	1,000	0	0	964	36	0	390	595	15	4	920	76	3	541	456
42	673	285	428	454	118	1,000	0	0	948	51	1	414	579	7	14	910	76	4	535	461
63	660	277	435	463	102	1,000	0	0	939	60	1	427	563	10	10	920	70	3	564	433
51	669	280	441	462	97	998	2	0	933	66	1	422	567	11	9	922	69	2	570	428
37	771	192	313	542	145	994	6	0	881	116	3	293	683	24	20	893	87	6	531	463
30	667	303	304	589	107	969	31	0	561	433	6	99	886	15	2	923	75	1	515	484
47	689	264	420	464	116	998	2	0	954	45	1	509	475	16	28	900	72	15	565	420
71	638	291	448	431	121	999	1	0	955	44	1	572	421	7	35	883	82	6	529	465
84	603	313	409	469	122	997	3	0	908	91	1	371	618	11	17	907	76	8	531	461
47	705	248	386	452	162	999	1	0	901	98	1	410	573	17	11	873	116	10	380	610
79	623	298	318	524	158	997	3	0	823	175	2	232	750	18	4	890	106	1	485	514
59	652	289	387	486	127	998	2	0	889	109	2	421	566	13	19	912	69	7	526	467
27	683	290	447	430	123	996	4	0	963	37	0	381	619	0	3	929	68	7	506	487
106	557	337	352	508	140	997	3	0	846	152	2	231	759	10	4	909	87	2	486	512
131	576	293	376	480	144	999	1	0	954	45	1	448	544	8	8	916	76	2	529	469
61	704	235	443	444	113	999	1	0	969	30	1	575	416	9	40	890	70	16	555	429
57	610	333	384	474	142	998	2	0	903	95	2	333	651	16	9	898	93	4	479	517
69	621	310	409	463	128	1,000	0	0	966	32	2	377	613	10	6	933	61	3	510	487
42	625	333	418	466	116	998	2	0	930	68	2	413	564	23	17	917	66	6	541	453
45	708	247	344	509	147	999	1	0	879	116	5	242	738	20	10	888	102	15	461	524
50	664	286	433	448	119	999	1	0	961	38	1	517	473	10	25	901	74	8	536	456
51	693	256	426	473	101	1,000	0	0	932	67	1	426	562	12	11	909	80	4	617	379
40	679	281	441	455	104	1,000	0	0	962	37	1	477	508	15	13	927	60	5	536	459
49	767	184	302	535	163	992	8	0	862	135	3	328	646	26	15	885	100	6	496	498
43	713	244	415	439	146	1,000	0	0	974	25	1	554	432	14	30	885	85	8	502	490
119	630	251	394	424	182	999	1	0	973	26	1	499	481	20	20	834	146	5	434	561
94	675	231	389	437	174	1,000	0	0	955	42	3	454	528	18	9	855	136	5	453	542
44	737	219	457	436	107	1,000	0	0	972	27	1	538	451	11	34	892	74	9	558	433
58	726	216	453	427	120	999	1	0	977	21	2	561	422	17	42	879	79	27	527	446
52	647	301	369	491	140	996	4	0	865	133	2	244	740	16	5	899	96	4	471	525
63	679	258	436	447	117	999	1	0	957	42	1	496	494	10	27	901	72	9	548	443
67	656	277	351	501	148	998	2	0	876	121	3	276	702	22	14	887	99	9	483	508
43	702	255	422	463	115	999	1	0	949	50	1	464	524	12	20	912	68	9	546	445
50	696	254	453	439	108	999	1	0	977	22	1	543	449	8	26	911	63	15	557	428
56	760	184	534	389	77	998	2	0	996	4	0	682	315	3	24	917	59	5	632	363
39	588	373	381	482	137	998	2	0	902	96	2	281	705	14	3	897	100	2	469	529
33	723	244	409	459	132	1,000	0	0	976	23	1	533	455	12	29	896	75	8	525	467
46	724	230	458	431	111	1,000	0	0	977	22	1	570	424	6	39	890	71	9	527	464
21	649	330	389	471	140	1,000	0	0	948	51	1	374	614	12	2	899	99	1	418	581

SUBSIDIARY

Distribution by Civil Condition of 1,000 of each

Caste.	DISTRIBUTION OF 1,000 OF EACH SEX														
	Males.														
	All ages.			*0—4 (inclusive).*			*5—11 (inclusive).*			*12—19 (inclusive).*			*20—39 (inclusive).*		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PUNJAB—*concluded.*															
54. Mirasi M.	542	371	87	999	1	0	982	17	1	816	173	11	255	650	95
55. Mochi M.	538	375	87	999	1	0	989	11	0	849	141	7	233	679	88
56. Mughal M.	538	375	87	1,000	0	0	990	9	1	870	121	9	262	664	74
57. Mussalli M.	574	364	62	1,000	0	0	994	6	0	874	120	6	250	685	65
58. Nai H.	502	378	120	1,000	0	0	968	27	5	723	259	18	230	652	118
59. Nai S.	551	344	105	1,000	0	0	993	7	0	832	160	8	318	588	94
60. Nai M.	533	383	84	999	1	0	982	17	1	844	145	11	233	686	81
61. Pakhiwara M.	555	341	101	1,000	0	0	997	3	0	814	154	32	248	646	106
62. Pathan M.	551	383	66	999	1	0	991	8	1	882	112	6	326	614	[illegible]
63. Qssab M.	531	387	82	998	2	0	969	29	2	789	199	12	219	691	[illegible]
64. Qureshi M.	544	380	76	999	1	0	988	9	3	861	131	8	272	658	70
65. Rajput H.	521	386	93	1,000	0	0	984	14	2	843	146	11	305	617	78
66. Rajput M.	569	357	74	999	1	0	987	12	1	865	128	7	308	628	64
67. Saini H.	494	370	136	1,000	0	0	976	20	4	723	258	19	240	646	114
68. Saini S. ..	500	384	116	998	2	0	965	34	1	492	502	6	251	653	96
69. Sansi H.	535	361	104	997	2	1	979	20	1	775	212	13	240	649	111
70. Sayad M.	518	377	75	1,000	0	0	990	9	1	878	116	6	269	659	72
71. Sheikh M.	486	424	90	1,000	0	0	976	23	1	814	176	10	221	694	85
72. Sunar H.	519	384	97	997	3	0	974	24	2	775	209	16	250	660	90
73. Sunar M.	505	381	114	999	1	0	960	40	0	634	331	32	258	520	222
74. Tarkhan H.	495	389	116	998	2	0	964	33	3	713	271	16	208	677	115
75. Tarkhan S.	530	362	108	999	1	0	986	13	1	827	166	7	278	633	89
76. Tarkhan M.	547	375	78	999	1	0	989	10	1	846	116	8	245	679	76
77. Toli M.	542	369	89	1,000	0	0	980	19	1	784	201	12	219	690	91
DELHI.	DISTRIBUTION OF 1,000 PERSONS OF EACH														
1. Aggarwal H.	389	464	147	1,000	0	0	971	19	10	616	338	16	147	740	113
2. Aggarwal (Jain)	433	437	130	1,000	0	0	969	31	0	768	232	0	163	729	108
3. Ahir H.	442	426	132	1,000	0	0	946	54	0	601	381	18	174	682	144
4. Arain M.	492	447	61	1,000	0	0	944	48	8	776	207	17	143	796	61
5. Brahman H.	419	467	114	1,000	0	0	979	21	0	684	297	19	199	697	104
6 Chamar H.	383	528	89	999	1	0	934	64	2	551	421	25	104	787	109
7. Chuhra H.	449	458	93	998	2	0	933	63	4	608	357	35	139	764	97
8. Dhanak H.	398	513	89	1,000	0	0	909	88	3	774	207	19	73	847	80
9. Dhobi H.	500	413	87	1,000	0	0	987	13	0	819	158	23	124	788	88
10. Dhobi M.	468	431	101	1,000	0	0	990	10	0	708	264	28	94	801	105
11. Dagi and Koli H.	371	550	79	996	4	0	985	9	6	725	242	33	114	806	80
12. Faqir M.	452	445	103	1,000	0	0	934	66	0	569	403	28	87	798	115
13. Gujjar H.	503	389	108	1,000	0	0	974	23	3	708	265	27	227	656	117
14. Jat H.	437	453	110	1,000	0	0	933	66	1	453	524	23	194	694	112
15. Jhiwar H.	416	501	83	1,000	0	0	887	104	9	616	309	75	145	770	85
16. Julaha H.	419	485	96	1,000	0	0	962	31	4	597	378	25	185	711	104
17. Khatri H.	371	509	120	1,000	0	0	956	38	6	745	235	20	149	733	118
18. Kumhar H.	381	514	105	1,000	0	0	962	37	1	448	512	40	119	782	99
19. Lohar H.	447	440	113	1,000	0	0	980	20	0	597	376	27	175	711	114
20. Machhi M.	372	548	80	1,000	0	0	957	43	0	403	589	8	158	729	113
21. Mali H.	391	492	117	1,000	0	0	974	20	6	699	288	13	148	737	115
22. Meo M.	446	459	95	1,000	0	0	992	8	0	659	318	23	131	768	101
23. Mughal M.	492	433	75	1,000	0	0	997	3	0	865	130	5	235	708	57
24. Nai H.	430	457	113	997	3	0	974	26	0	600	376	24	133	759	108
25. Pathan M.	447	463	90	999	1	0	989	10	1	830	165	5	251	672	77
26. Qureshi M.	481	428	91	1,000	0	0	970	30	0	855	132	13	226	695	79
27. Rajput H.	413	450	137	997	3	0	980	20	0	695	270	26	189	686	125
28. Rajput M.	411	541	48	1,000	0	0	954	46	0	719	267	14	229	708	63
29. Saini H.	490	406	104	1,000	0	0	983	11	6	709	291	0	136	740	124
30. Sansi H.	364	487	149	1,000	0	0	955	45	0	435	435	130	135	769	96
31. Sayad M.	498	426	76	1,000	0	0	992	8	0	886	104	10	242	692	66
32. Sheikh M.	466	473	61	1,000	0	0	980	19	1	845	146	9	202	733	65
37. Sunar H.	422	408	170	1,000	0	0	951	49	0	730	214	56	169	728	103
34. Tarkhan H.	399	503	98	1,000	0	0	984	11	5	692	277	31	150	764	86
35. Teli M.	445	438	117	1,000	0	0	917	76	7	686	295	19	148	794	58

TABLE V—*concluded.*

sex at certain ages for selected castes.

AND AGE BY CIVIL CONDITION.

40 and over.			Females. All ages.			0—4 (inclusive.)			5—11 (inclusive).			12—19 (inclusive).			20—39 (inclusive).			40 and over.		
Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
56	689	255	427	443	130	999	1	0	957	42	1	533	455	12	37	889	74	14	516	470
47	689	264	438	448	114	998	2	0	971	28	1	511	480	9	24	910	66	9	556	435
42	691	267	408	453	139	999	1	0	967	33	0	517	466	17	40	866	94	23	510	467
45	750	205	486	425	89	999	1	0	981	18	1	582	398	20	39	896	65	13	623	364
85	575	340	359	475	166	999	1	0	901	96	3	284	699	17	6	878	116	4	440	556
100	591	309	403	454	143	997	3	0	970	29	1	476	512	12	17	894	89	3	524	473
40	708	252	433	446	121	999	1	0	958	41	1	513	473	14	29	900	71	14	538	448
61	647	292	451	446	103	1,000	0	0	953	47	0	304	587	19	24	922	54	15	570	415
54	746	200	426	448	126	999	1	0	980	20	0	568	422	10	34	885	81	12	540	448
41	702	257	427	455	118	997	3	0	925	74	1	539	450	11	30	889	81	10	530	460
50	723	227	425	438	137	999	1	0	977	23	0	571	417	12	63	846	91	17	512	471
98	612	260	331	462	207	999	1	0	902	95	3	330	638	32	25	816	159	6	379	615
60	694	246	434	429	137	999	1	0	957	41	2	561	428	11	36	863	101	9	501	490
105	527	368	352	476	172	999	1	0	914	85	1	318	665	17	5	894	101	2	468	530
113	474	413	362	498	140	999	1	0	940	59	1	286	699	15	9	912	79	4	526	470
81	614	305	427	439	134	995	5	0	940	60	0	426	536	38	26	856	118	5	530	465
76	702	223	427	433	140	998	2	0	976	23	1	570	418	12	50	848	102	16	520	464
46	701	253	398	472	130	998	2	0	935	63	2	456	531	13	19	892	89	7	524	469
82	630	288	367	466	167	998	2	0	902	97	1	367	611	22	11	858	131	5	445	550
74	714	212	444	415	111	1,000	0	0	957	41	2	527	463	10	36	881	83	23	556	421
78	590	332	362	492	146	997	3	0	883	116	1	252	730	18	5	902	93	2	473	525
83	594	323	380	486	134	999	1	0	951	48	1	445	537	18	6	913	81	1	540	450
42	713	245	430	457	113	999	1	0	968	31	1	506	481	13	27	905	68	9	566	425
48	661	291	420	460	120	999	1	0	935	63	2	429	560	11	13	915	72	5	528	467

AGE BY CIVIL CONDITION.

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
49	552	399	298	506	196	999	1	0	968	29	3	199	780	21	7	860	133	4	396	600
75	559	366	312	485	203	1,000	0	0	960	32	8	223	732	45	5	810	185	3	417	580
71	564	365	337	511	152	1,000	0	0	918	82	0	220	769	11	1	910	89	1	454	545
25	771	204	353	559	88	990	10	0	897	98	5	179	741	80	6	956	38	0	701	299
74	606	320	314	472	214	999	1	0	960	36	4	191	766	43	8	821	171	7	365	628
21	761	218	308	579	113	999	1	0	801	196	3	96	890	14	7	923	70	2	470	528
24	685	291	356	540	104	997	3	0	854	143	3	169	815	16	5	927	68	5	507	488
33	675	292	293	595	112	1,000	0	0	708	292	0	137	863	0	0	936	64	0	496	504
89	612	299	353	508	139	1,000	0	0	974	21	5	197	775	28	17	906	77	5	438	557
79	619	302	448	445	107	1,000	0	0	961	39	0	269	731	0	120	749	131	14	561	425
36	758	206	321	582	97	992	8	0	911	89	0	169	797	34	14	931	55	3	541	456
17	626	357	349	536	115	1,000	0	0	721	263	16	221	761	18	11	924	65	9	498	493
84	612	304	324	518	158	1,000	0	0	704	291	5	430	559	11	13	867	120	4	440	556
74	579	347	343	534	123	1,000	0	0	914	86	0	154	840	6	1	939	60	1	511	488
54	676	270	321	537	142	1,000	0	0	918	78	4	173	810	17	7	925	68	5	432	563
50	708	242	288	584	128	1,000	0	0	831	168	1	109	875	16	8	928	64	0	438	562
34	667	299	322	521	157	1,000	0	0	958	42	0	195	796	9	14	888	98	8	414	578
29	629	342	347	536	117	1,000	0	0	891	108	1	121	840	39	2	916	82	0	510	490
22	619	359	355	514	131	1,000	0	0	925	75	0	141	837	22	5	929	66	7	486	507
52	704	244	347	591	62	1,000	0	0	894	106	0	197	787	16	58	942	0	0	615	385
14	698	288	300	532	168	1,000	0	0	937	63	0	179	791	30	11	893	96	0	403	597
22	701	277	359	522	119	1,000	0	0	937	63	0	211	782	7	4	924	72	3	486	511
53	726	221	430	385	185	1,000	0	0	981	19	0	419	568	13	38	899	63	15	349	636
24	616	360	342	509	149	1,000	0	0	952	48	0	211	773	16	9	903	88	2	436	562
40	728	232	309	602	89	996	4	0	963	37	0	276	719	5	20	925	55	8	674	318
69	662	269	473	437	90	1,000	0	0	1,000	0	0	318	670	12	213	722	65	20	581	399
68	560	372	332	523	145	997	3	0	926	73	1	209	777	14	24	872	104	11	434	555
54	803	83	350	543	107	995	5	0	858	138	4	244	727	29	2	941	57	9	558	433
58	637	305	413	478	109	1,000	0	0	952	48	0	17	687	296	9	913	78	0	561	439
0	615	385	273	536	191	1,000	0	0	842	158	0	222	630	148	0	865	135	0	368	632
37	738	225	421	397	182	998	2	0	986	14	0	571	416	13	22	815	163	5	441	554
27	811	162	394	504	102	999	1	0	939	61	0	518	470	12	15	940	45	12	539	449
70	449	481	319	481	200	1,000	0	0	966	34	0	206	784	10	23	844	133	0	350	650
26	687	287	311	565	124	1,000	0	0	942	44	14	141	831	28	0	924	76	6	536	458
22	629	349	420	481	99	992	8	0	868	132	0	374	626	0	0	926	74	0	529	471

SUBSIDIARY TABLE VI.

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP NOS. 1 TO 6.

PART I. TOTAL NO. OF CASES 166,419.

Duration of marriages in years	0	1	2	3	4	5	6	7	8	9	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 and over.	Totals of Rows.
PUNJAB.																
1. Total No. of cases ..	308	2,115	2,930	3,592	3,963	4,785	4,911	4,511	6,782	4,293	29,722	25,750	23,232	14,964	34,561	166,419
2. No. of male children born alive	3	219	972	1,618	2,507	3,696	4,553	5,200	8,489	6,662	52,300	56,674	60,931	44,140	106,496	354,460
3. No. of female children born alive ..	..	180	766	1,327	2,059	3,314	4,243	4,651	7,643	6,166	47,908	50,147	52,668	38,166	90,021	309,259
4. No. of male children now living	3	169	792	1,291	1,919	2,784	3,686	4,051	6,533	5,242	40,661	42,588	45,582	33,048	76,756	265,105
5. No. of female children now living ..	..	138	635	1,036	1,675	2,509	3,337	3,751	5,941	4,947	37,205	37,760	39,280	27,931	63,038	229,183
6. No. of childless marriages ..	305	1,783	1,484	1,325	1,032	905	631	421	530	219	1,084	508	433	225	490	11,375
7. No. of male first-born ..	3	186	824	1,290	1,622	2,098	2,345	2,192	3,376	2,207	16,317	14,260	13,034	8,497	20,265	88,516
8. No. of female first-born ..	..	146	622	977	1,309	1,782	1,935	1,898	2,876	1,867	12,321	10,982	9,765	6,242	13,806	66,528
9. No. of families with 0 children living ..	306	1,837	1,702	1,636	1,377	1,304	1,019	730	891	414	2,061	1,086	814	393	1,071	16,641
10. No. of families with 1 child living ..	2	277	1,152	1,729	1,092	2,404	2,348	1,987	2,563	1,294	7,082	3,709	2,522	1,445	3,611	34,117
11. No. of families with 2 children living ..	..	1	76	183	471	849	1,173	1,215	2,159	1,334	8,939	5,709	3,822	2,275	5,578	33,784
12. No of families with 3 to 5 children living ..	..	..	..	44	123	227	365	562	1,075	1,169	11,085	13,670	12,998	8,061	17,882	67,261
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	1	6	17	94	82	554	1575	3,066	2,779	6,363	14,537
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	1	1	10	11	56	79

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL NO. OF CASES 153,511.

Age of woman at marriage.	Under 8.	9	10	11	12	13	14	15	16	17	18	19	20 to 24.	25 to 29.	30 to 35.	35 to 39	40 and over	Totals of Rows.
1. No. of families with 0 children living ..	1,359	507	1,039	628	761	746	651	1,104	453	403	398	263	842	325	178	77	49	9,783
2. No. of families with 1 child living ..	3,135	1,757	2,896	1,471	2,179	2,213	2,138	3,450	1,548	1,537	1,285	1,039	2,715	878	,365	163	196	28,965
3. No. of families with 2 children living. ..	3,300	1,731	3,322	1,714	2,246	2,409	2,579	3,927	2,050	1,612	1,636	980	3,506	1,175	512	219	13[illegible]	33,053
4. No. of families with 3 to 5 children living ..	6.464	3,140	7,524	2,843	4,288	4,015	4,692	9,872	3,474	3,350	3,334	2,270	7,982	2,512	862	311	161	67,094
5. No. of families with 6 to 10 children living ..	1,368	639	1,923	670	942	815	944	2,288	700	625	657	405	1,707	519	186	103	46	14,537
6. No. of families with over 10 children living..	11	2	8	5	5	5	2	10	4	2	6	3	9	..	3	2	2	79
Totals of columns	15,637	7,776	16,712	7,331	10,421	10,203	11,006	20,651	8,229	7,529	7,316	4,960	16,761	5,409	2,106	875	589	153,511

SUBSIDIARY TABLE VI (1).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 1.

PART I. TOTAL NO. OF CASES 16,611.

Duration of marriages in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over	Totals of Rows.
PUNJAB.																
1. Total No. of cases ..	16	164	248	311	340	360	384	492	818	605	2,799	2,365	2,325	1,806	3,578	16,611
2. No. of male children born alive ..	..	30	113	179	227	444	644	765	1,355	902	4,900	4,920	5,500	4,665	9,790	34,434
3. No. of female children born alive ..	..	20	93	154	189	438	625	703	1,268	851	4,634	4,258	4,645	4,234	8,640	30,752
4. No. of male children now living ..	..	20	90	144	183	372	522	648	1,164	758	3,916	3,603	4,250	3,627	7,380	26,677
5. No. of female children now living ..	..	13	72	125	160	348	525	616	1,102	708	3,773	3,281	3,589	3,320	6,239	23,871
6. No. of childless marriages ..	16	131	122	114	83	58	58	49	42	25	108	46	52	22	61	987
7. No. of male first-born ..	..	21	73	115	139	166	177	238	396	315	1,584	1,253	1,289	1,003	2,121	8,890
8. No. of female firstborn ..	..	12	53	82	118	136	149	205	380	265	1,107	1,066	984	781	1,396	6,734
9. No. of families with 0 children living ..	16	134	139	141	105	91	82	65	75	39	178	89	76	37	122	1,389
10. No. of families with 1 child living ..	..	30	95	149	171	175	178	229	231	178	735	402	240	219	579	3,611
11. No. of families with 2 children living ..	..	..	14	14	49	66	86	93	336	156	836	472	365	292	663	3,442
12. No. of families with 3 to 5 children living ..	..	..	..	7	15	28	35	99	115	168	951	1,203	1,239	863	1,599	6,322
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	..	3	6	61	64	99	199	404	392	612	1,840
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	3	7

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL NO. OF CASES 15,532.

Age of woman at marriage.	Under 8.	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	Total of Rows.
1. No. of families with 0 children living ..	145	52	94	48	75	70	56	96	49	38	20	19	51	32	7	2	..	854
2. No. of families with 1 child living ..	562	330	378	177	240	232	234	306	154	123	76	55	135	38	31	40	55	3,166
3. No. of families with 2 children living ..	497	320	353	255	305	248	223	314	210	114	87	61	235	42	21	58	22	3,365
4. No. of families with 3 to 5 children living	800	473	718	419	501	509	470	745	313	241	265	167	444	152	43	21	19	6,300
5. No. of families with 6 to 10 children living ..	198	111	261	151	171	108	148	228	107	72	75	51	107	26	16	8	2	1,840
6. No. of families with over 10 children living ..	1	1	2	1	..	..	1	1	..	..	..	..	..	..	..	..	..	7
Totals of columns ..	2,203	1,287	1,800	1,050	1,293	1,167	1,131	1,690	834	588	523	353	972	290	118	129	98	15,532

SUBSIDIARY TABLE VI (2).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 2.

PART I. TOTAL No. OF CASES 74,813.

Duration of marriages in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over	Totals of Rows.
PUNJAB.																
1. Total No. of cases	135	830	1,225	1,487	1,730	2,110	2,224	2,009	2,774	1,811	12,774	11,629	10,530	6,805	16,740	74,813
2. No. of male children born alive ..	2	91	402	671	1,174	1,560	1,937	2,345	3,406	2,977	23.088	25,656	27,929	20,177	51,839	163,254
3. No. of female children born alive ..	..	73	319	534	924	1,339	1,786	2,025	2,968	2,815	21,175	22,802	24,336	16,589	43,624	141,209
4. No. of male children now living.	2	67	335	528	928	1,164	1,711	1,922	2,661	2,405	18,407	19,329	21,305	15,408	37,595	123,767
5. No. of female children now living ..	..	53	265	403	785	998	1,447	1,734	2,304	2,321	16,662	17,555	18,447	12,423	31,236	106,633
6. No. of childless marriages ..	133	695	619	549	443	396	256	171	243	76	432	213	144	75	222	4,667
7. No. of male firstborn ..	2	74	346	535	733	916	1,110	996	1,271	953	7,095	6,531	5,937	3,946	9,874	40,419
8. No. of female firstborn ..	..	61	260	403	554	798	858	842	1,160	782	5,247	4,885	4,449	2,784	6,644	29,727
9. No. of families with 0 children living ..	134	724	707	687	554	566	417	288	380	170	857	451	300	154	472	6,861
10. No. of families with one child living ..	1	105	493	701	892	1,099	1,119	911	1,075	545	3,059	1,676	1,088	638	1,565	14,967
11. No. of families with 2 children living ..	..	1	25	82	211	366	544	582	817	540	3,819	2,672	1,757	1,072	2,717	15,205
12. No. of families with 3 to 5 children living ..	..	..	..	17	73	79	143	223	472	545	4,831	6,159	6,020	3,754	8,886	31,202
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	..	1	5	30	11	207	671	1,363	1,185	3,067	6,540
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	1	..	2	2	33	38

PART II. MARRIAGE OF 5 YEARS' DURATION AND OVER. TOTAL No. OF CASES 69,406.

Age of woman at marriage.	Under 8	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 35	35 to 39	40 and over	Totals of Rows.
1. No. of families with 0 children living ..	496	175	457	312	314	310	250	428	210	178	195	110	373	122	86	29	10	4,055
2. No. of families with 1 child living ..	1,229	692	1,314	551	909	935	883	1,570	763	741	652	534	1,312	402	152	58	78	12,775
3. No. of families with 2 children living ..	1,311	542	1,442	776	981	1,153	1,239	1,794	989	746	817	464	1,720	537	280	56	39	14,886
4. No. of families with 3 to 5 children living ..	2,797	1,214	3,432	1,074	1,853	1,669	2,173	4,722	1,694	1,773	1,668	1,191	4,107	1,134	406	149	56	31,112
5. No. of families with 6 to 10 children living.	602	263	861	270	402	365	427	1,031	331	299	330	178	838	222	82	24	15	6,540
6. No. of families with over 10 children living.	9	..	4	2	2	1	..	5	3	1	2	3	3	..	1	1	1	38
Totals of columns	6,444	2,886	7.510	2,985	4,461	4.433	4,072	9,550	3,990	3,738	3,664	2,480	8,353	2,417	1,007	317	199	69,406

SUBSIDIARY TABLE VI (3).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 3.

PART I. TOTAL NO. OF CASES 11,879.

Duration of marriages in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over	Totals of Rows.
PUNJAB.																
1. Total No. of cases	18	134	216	256	337	338	342	337	476	289	2,150	1,812	1,622	1,219	2,333	11,879
2. No. of male children born alive ..	..	*15*	*72*	*100*	*207*	*254*	*296*	*323*	*555*	*387*	*3,901*	*4,288*	*4,732*	*3,893*	*7,727*	*26,750*
3. No. of female children born alive ..	..	9	58	77	157	199	309	327	497	357	3,276	3,731	4,048	3,533	6,391	22,969
4. No. of male children now living ..	..	15	53	81	154	188	205	207	381	289	2,886	3,211	3,318	2,787	5,427	19,202
5. No. of female children now living ..	..	7	45	63	129	164	213	238	356	263	2,571	2,795	2,813	2,429	4,436	16,522
6. No. of childless marriages ..	18	115	108	103	96	57	34	30	33	16	82	30	24	14	21	781
7. No. of male first born ..	..	14	62	87	135	158	150	159	241	150	1,176	974	891	656	1,363	6,216
8. No. of female first born ..	..	5	46	66	106	123	158	148	202	123	892	808	707	549	949	4,882
9. No. of families with 0 children living ..	18	115	129	125	128	84	70	68	65	32	155	77	52	39	51	1,208
10. No. of families with 1 child living ..	..	19	79	117	165	178	159	133	177	84	454	252	142	102	220	2,281
11. No. of families with 2 children living ..	..	..	8	12	36	57	83	92	167	92	621	334	237	164	295	2,198
12. No. of families with 3 to 5 children living ..	..	..	..	2	8	19	30	43	67	80	891	1,022	937	638	1,268	5,005
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	..	..	1	..	1	29	127	254	275	494	1,181
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	6

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL NO. OF CASES 10,918.

Age of woman at marriage.	Under 8	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 35	35 to 39	40 and over	Totals of Rows.
1. No. of families with 0 children living	89	29	71	53	75	76	53	87	33	27	20	10	49	14	5	2	..	693
2. No. of families with 1 child living ..	166	93	200	137	173	181	173	236	116	99	79	63	145	25	11	3	1	1,901
3. No. of families with 2 children living ..	196	89	248	113	202	151	186	272	151	110	98	76	180	47	11	8	4	2,142
4. No. of families with 3 to 5 children living ..	512	246	632	284	385	354	400	697	287	215	224	129	451	123	35	17	4	4,995
5. No. of families with 6 to 10 children living ..	125	57	152	72	88	76	94	176	50	49	45	32	125	26	6	5	3	1,181
6. No. of families with over 10 children living ..	..	1	..	1	..	1	..	1	..	1	1	..	..	..	..	..	..	6
Totals of columns ..	1,088	515	1,303	660	923	839	906	1,469	637	501	467	310	950	235	68	35	12	10,918

SUBSIDIARY TABLE VI (4).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 4.

PART I. TOTAL No. OF CASES 7,649.

Duration of marriages in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over.	Totals of Rows.
PUNJAB																
1. Total No. of cases ..	13	92	129	167	162	223	244	179	337	201	1,383	1,201	1,064	665	1,589	7,649
2. No. of male children born alive ..	..	9	53	91	103	160	225	169	407	309	2,431	2,883	3,075	2,141	5,428	17,481
3. No. of female children born alive ..	..	16	40	59	85	170	175	147	322	256	2,150	2,495	2,597	1,876	4,405	14,889
4. No. of male children now living	..	8	44	72	75	117	163	119	295	237	1,801	2,092	2,267	1,569	3,655	12,614
5. No. of female children now living	..	14	35	48	62	111	126	111	231	195	1,619	1,869	1,914	1,375	2,736	10,449
6. No. of childless marriages ..	13	74	50	56	37	41	31	17	31	9	38	29	21	10	15	472
7. No. of male firstborn ..	..	7	43	64	68	97	129	90	183	114	752	689	620	373	935	4,144
8. No. of female firstborn ..	..	11	36	47	57	85	84	72	123	78	593	503	423	282	639	3,033
9. No. of families with 0 children living ..	13	76	56	68	46	65	57	31	38	19	79	48	29	14	44	683
10. No. of families with 1 child living	..	16	71	88	98	108	107	87	162	49	318	153	103	51	141	1,535
11. No. of families with 2 children living ..	..	..	2	9	16	43	61	45	91	73	436	258	168	72	239	1,512
12. No. of families with 3 to 5 children living ..	..	..	..	2	2	7	18	16	46	60	524	667	605	375	853	3,175
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	..	1	..	..	..	26	75	159	152	306	719
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	4

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL No. OF CASES 7,086.

Age of woman at marriage.	Under 8	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 35	35 to 39	40 and over	Totals of Rows
1. No. of families with 0 children living ..	51	25	51	19	33	33	27	57	29	17	18	9	29	14	7	2	3	424
2. No. of families with 1 child living ..	142	42	128	59	120	110	97	138	75	84	57	46	124	31	15	8	6	1,282
3. No. of families with 2 children living ..	142	66	135	65	103	83	134	198	96	64	65	54	183	60	18	15	5	1,486
4. No. of families with 3 to 5 children living ..	282	99	386	137	201	211	243	483	169	156	163	102	376	109	36	12	6	3,171
5. No. of families with 6 to 10 children living ..	71	30	97	34	34	44	41	128	20	32	31	28	76	30	14	6	3	719
6. No. of families with over 10 children living	..	..	..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	4
Totals of columns ..	688	262	797	314	492	482	542	1,004	389	353	334	239	790	244	90	43	23	7,086

SUBSIDIARY TABLE VI (5).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 5.

PART I. TOTAL NO. OF CASES 31,832.

Duration of marriage in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over	Totals of Rows.
PUNJAB.																
1. Total No. of cases ..	79	472	536	695	761	980	908	835	1,351	740	6,012	5,244	4,560	2,643	6,016	31,832
2. No. of male children born alive ..	1	40	145	262	428	679	753	923	1,589	1,215	10,550	11,537	11,912	8,051	18,842	66,927
3. No. of female children born alive ..	..	24	120	253	372	641	668	818	1,510	1,062	9,896	10,264	10,601	7,520	16,262	60,011
4. No. of male children now living ..	1	31	119	218	297	499	500	667	1,180	925	7,087	8,628	8,529	5,980	13,252	48,873
5. No. of female children now living ..	..	17	103	182	273	486	505	603	1,154	841	7,436	7,656	7,541	5,283	11,043	43,123
6. No. of childless marriages ..	78	417	304	285	218	214	158	88	100	55	260	112	115	36	93	2,533
7. No. of male first-born ..	1	35	128	226	304	405	395	396	647	359	3,180	2,942	2,508	1,451	3,461	16,438
8. No. of female firstborn ..	..	20	104	184	239	361	355	351	604	326	2,572	2,190	1,937	1,156	2,462	12,861
9. No. of families with 0 children living ..	78	426	346	341	314	294	233	150	192	86	465	280	220	79	239	3,743
10. No. of families with 1 child living ..	1	46	180	311	357	467	414	351	542	233	1,441	735	565	261	646	6,540
11. No. of families with 2 children living ..	..	..	10	33	79	179	190	226	390	253	1,849	1,148	758	372	974	6,461
12. No. of families with 3 to 5 children living ..	..	..	..	10	11	49	71	107	226	166	2,166	2,812	2,524	1,464	3,141	12,747
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	1	..	1	1	2	91	268	493	465	1,009	2,331
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	7	10

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL NO. OF CASES 29,289.

Age of woman at marriage.	Under 8	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	Totals of Rows.
1. No. of families with 0 children living ..	389	146	233	107	163	158	140	280	88	83	86	54	192	56	34	11	18	2,238
2. No. of families with 1 child living ..	665	425	523	331	433	423	435	672	230	268	228	179	520	175	78	24	36	5,645
3. No. of families with 2 children living ..	725	518	725	287	374	456	428	744	316	304	300	172	640	208	81	38	23	6,339
4. No. of families with 3 to 5 children living ..	1,277	721	1,519	538	803	762	809	1,970	588	543	565	377	1,550	438	171	62	33	12,726
5. No. of families with 6 to 10 children living ..	211	101	278	74	145	124	124	424	94	105	83	66	338	99	28	22	15	2,331
6. No. of families with over 10 children living ..	1	..	..	..	1	1	1	3	..	..	1	..	1	..	1	..	..	10
Totals of columns ..	3,268	1,911	3,278	1,337	1,919	1,924	1,937	4,093	1,316	1,303	1,263	848	3,241	976	393	157	125	29,289

SUBSIDIARY TABLE VI (6).

Showing the data collected from the Family Census, 1920-21, for marriages for which both husband and wife were alive. Each case corresponds to one marriage.

CASTE GROUP No. 6.

PART I. TOTAL NO. OF CASES 23,635.

Duration of marriages in years.	0	1	2	3	4	5	6	7	8	9	10 to 14	15 to 19	20 to 24	25 to 29	30 and over	Totals of Rows.
PUNJAB.																
1. Total No. of cases ..	47	423	576	676	633	774	809	659	1,026	647	4,604	3,499	3,131	1,826	4,305	23,635
2. No of male children born alive ..	..	34	187	315	368	599	698	675	1,177	872	7,430	7,390	7,783	5,213	12,870	45,611
3. No. of female children born alive ..	..	38	136	250	332	521	680	631	1,078	825	6,777	6,597	6,541	4,414	10,609	39,429
4. No. of male children now living ..	..	28	151	248	282	444	525	488	852	628	5,664	5,725	5,913	3,677	9,447	34,072
5. No. of female children now living ..	..	34	115	215	266	402	521	449	791	619	5,144	4,604	4,976	3,101	7,348	28,58[illegible]
6. No. of childless marriages ..	47	351	281	218	155	139	94	66	81	38	164	78	77	68	78	1,935
7. No. of male first-born ..	..	35	172	263	243	356	381	313	538	316	2,530	1,891	1,789	1,068	2,511	12,409
8. No. of female firstborn ..	..	37	123	195	235	279	331	280	407	293	1,910	1,530	1,265	690	1,716	9,291
9. No. of families with 0 children living ..	47	362	325	274	230	201	160	128	141	68	327	141	137	70	143	2,757
10. No. of families with 1 child living ..	..	61	234	363	309	387	371	276	376	205	1,075	491	384	174	457	5,16[illegible]
11. No. of families with 2 children living ..	..	..	17	33	80	138	209	177	358	220	1,378	825	537	303	690	4,965
12. No. of families with 3 to 5 children living ..	..	..	..	6	14	45	68	74	149	150	1,722	1,807	1,073	967	2,135	8,810
13. No. of families with 6 to 10 children living ..	..	..	..	..	..	..	1	4	2	4	102	235	393	310	875	1,92[illegible]
14. No. of families with over 10 children living ..	..	..	..	..	..	..	..	..	..	..	..	..	7	2	5	14

PART II. MARRIAGES OF 5 YEARS' DURATION AND OVER. TOTAL NO. OF CASES 21,280.

Age of woman at marriage.	Under 8	9	10	11	12	13	14	15	16	17	18	19	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	Totals of Rows
1. No. of families with 0 children living ..	189	80	133	89	101	99	125	156	44	60	59	61	148	87	39	31	18	1,519
2. No. of families with 1 child living ..	371	175	353	216	304	332	316	528	210	222	193	162	479	207	78	30	20	4,19[illegible]
3. No. of families with 2 children living ..	429	196	419	218	281	318	369	605	288	274	269	153	548	281	101	44	42	4,83[illegible]
4. No. of families with 3 to 5 children living ..	796	387	837	391	545	510	597	1,255	423	422	449	304	1,054	556	171	50	43	8,79[illegible]
5. No. of families with 6 to 10 children living	161	77	274	69	102	98	110	301	98	68	93	50	223	116	[illegible]	38	8	1,926
6. No. of families with over 10 children living	..	..	2	2	..	1	1	..	..	..	2	..	3	..	1	1	1	[illegible]
Totals of columns	1,946	915	2,018	985	1,333	1,358	1,518	2,845	1,063	1,046	1,065	730	2,455	1,247	430	194	132	21,280

SUBSIDIARY TABLE VII-A.

Statement showing gross fertility for male and female children born alive for varying duration of marriage for caste groups (Punjab Census 1921).

Duration of marriage.	Average number of male and female (children) born alive at Census of 1921.													
	Group I.		*Group II.*		*Group III.*		*Group IV.*		*Group V.*		*Group VI.*		*All Groups.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0—1	0	0	0·015	0	0	0	0	0	0·013	0	0	0	·010	0
1—2	0·18	0·12	0·11	·09	0·11	·07	0·10	0·17	0·09	0·05	0·08	0·09	0·10	0·09
2—3	0·46	0·38	0·33	·26	0·33	·27	0·41	0·31	0·27	0·22	0·33	0·24	0·33	0·26
3—4	0·58	0·50	0·46	.36	0·39	·30	0·55	0·35	0·38	0·36	0·47	0·37	0·45	0·37
4—5	0·67	0·56	0·68	·53	0·61	·47	0·64	0·52	0·56	0·49	0·58	0·53	0·63	0·52
5—6	1·23	1 22	0·74	·64	0·75	·59	0·72	0·79	0·69	0·65	0·77	0·67	0·77	0·69
6—7	1·68	1 63	0·87	·80	0·87	·91	0·92	0·72	0·83	0·74	0·86	0·84	0·93	0·87
7—8	1·56	1 43	1·17	1·01	0·96	·97	0·94	0·82	1·11	0·98	1 02	0·96	1·15	1·03
8—9	1·66	1·55	1·23	1 07	1 17	1 04	1 21	0·95	1·18	1·12	1 14	1 05	1 25	1·12
9—10	1·49	1·41	1·64	1·55	1·34	1 23	1·54	1·27	1 64	1·44	1·35	1·27	1 55	1·44
10—14	1·75	1 65	1·80	1 65	1·81	1·52	1·76	1·55	1·75	1 64	1 61	1·47	1·78	1·63
15—19	2 08	1·80	2·21	1·96	2·37	2·06	2·40	2 08	2·20	1·96	2·11	1·89	2·21	1·95
20—24	2·37	1·09	2·65	2·30	2·92	2·49	2·89	2·44	2·61	2·32	2·48	2·09	2·62	2·26
25—29	2·58	2·35	2·97	2·44	3·10	2·90	3·22	2·82	3·04	2·84	2·85	2·41	2·95	2·55
30 and over	2·73	2·41	3·10	2·61	3·31	2·74	3·41	2·83	3·13	2·70	2·99	2·46	3·08	2·61

SUBSIDIARY TABLE VII-B.

Statement showing net fertility for male and female children now living for varying durations of marriage for caste groups (Punjab Census 1921).

Duration of marriage.	Average number of male and female children living at Census 1921.													
	Group I.		*Group II.*		*Group III.*		*Group IV.*		*Group V.*		*Group VI.*		*All Groups.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0—1	0	0	·015	0	0	0	0	0	0·013	0	0	0	·010	0
1—2	0·12	0·08	0·81	·064	0·11	0·05	0·09	0·15	0·07	0·04	0·07	0·08	·08	·07
2—3	0·36	0·29	·27	·22	0·24	0·21	0·34	0·27	0·22	0·19	0·26	0·20	·27	·22
3—4	0·46	0·40	·36	·27	0·32	0·25	0·43	0·29	0·31	0·26	0·37	0·32	0·36	0·29
4—5	0·54	0·47	·54	·45	0·46	0·38	0·46	0·38	0·39	0·36	0·45	0·42	0·48	0·42
5—6	1·03	0·97	·55	·47	0·56	0·48	0·52	0·50	0·51	0·50	0·57	0·52	0·58	0·52
6—7	1·36	1 37	·77	·65	0·60	0·62	0·67	0·51	0·62	0·56	0·65	0·64	0·75	0·68
7—8	1·32	1·25	·96	·86	0·61	0·71	0·67	0·62	0·80	0·72	0·74	0·68	0·90	0·83
8—9	1·42	1·35	·96	·83	0·80	0·75	0·88	0·69	·087	0·85	0·83	0·77	0·98	0·87
9—10	1·25	1·17	1·33	1·28	1·00	0·91	1·18	0·97	1·25	1·14	0·97	0·96	1·22	1·15
10—14	1·40	1·35	1·44	1·30	1·34	1·20	1·30	1·17	1·33	1·23	1·23	1·12	1·37	1·25
15—19	1·52	1·39	1·66	1·51	1·77	1·54	1·74	1·56	1·45	1·46	1·64	1·32	1·66	1·47
20—24	1·83	1·54	2·02	1·75	2 05	1·74	2·13	1·80	1·87	1·65	1·87	1·59	1·96	1·69
25—29	2·01	1·84	2·26	1·83	2·29	1·99	2·36	2·07	2·26	2·00	2·01	1·70	2·21	1·87
30 and over	2·06	1·74	2·25	1·87	2·32	1·90	2·30	1·72	2·20	1·83	2·19	1·71	2·23	1·83

SUBSIDIARY TABLE VIII-A.

Statement showing the observed and calculated average gross fertility (*i.e.*, for all children born alive) for varying duration of marriage for different Caste Groups.—(Punjab Census 1921).

Duration of marriage.	Group I.		Group II.		Group III.		Group IV.		Group V.		Group VI.		All Groups.	
	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.
0—1	0	0·11	0·015	0·10	0	0·10	0	0·10	0·013	0·09	0	0·09	0·010	0·10
1—2	0·305	0·47	0·197	0·42	0·179	0·41	0·272	0·41	0·136	0·39	0·170	0·38	0·189	0·42
2—3	0·831	0·82	0·589	0·74	0·602	0·73	0·721	0·73	0·494	0·69	0·561	0·67	0·593	0·73
3—4	1·071	1·14	0·810	1·04	0·691	1·03	0·898	1·03	0·741	0·98	0·836	0·95	0·820	1·04
4—5	1·224	1·46	1·213	1·33	1·080	1·32	1·160	1·32	1·051	1·26	1·106	1·22	1·152	1·33
5—6	2·321	1·77	1·374	1·62	1·340	1·61	1·507	1·60	1·347	1·52	1·447	1·48	1·465	1·62
6—7	3·305	2·07	1·674	1·89	1·769	1·88	1·639	1·89	1·565	1·79	1·708	1·73	1·791	1·89
7—8	2·984	2·35	2·175	2·16	1·929	2·16	1·765	2·15	2·085	2·05	1·982	1·98	2·184	2·16
8—9	3·207	2·63	2·298	2·42	2·210	2·41	2·163	2·42	2·294	2·30	2·180	2·21	2·379	2·41
9—10	2·898	2·92	3·198	2·66	2·574	2·67	2·811	2·67	3·077	2·54	2·623	2·43	2·988	2·66
10—14	3·406	3·46	3·465	3·24	3·338	3·27	3·312	3·27	3·401	3·11	3·086	2·97	3·407	3·24
15—19	3·881	4·40	4·167	4·21	4·425	4·29	4·478	4·20	4·157	4·11	3·997	3·90	4·148	4·21
20—24	4·363	5·03	4·954	4·96	5·413	5·11	5·331	5·14	4·937	4·91	4·575	4·63	4·890	4·95
25—29	4·927	5·35	5·403	5·46	6·092	5·72	6·041	5·77	5·891	5·54	5·272	5·15	5·500	5·46
30 and over	5·151	4·74	5·703	5·70	6·051	6·32	6·245	6·45	5·835	6·25	5·454	5·59	5·685	5·70

SUBSIDIARY TABLE VIII-B.

Statement showing the observed and calculated average net fertility (*i. e.*, for children now living) for varying duration of marriage for different Caste Groups.—(Punjab Census 1921).

Duration of marriage.	Group I		Group II.		Group III.		Group IV.		Group V.		Group VI.		All Groups	
	Observed.	Calculated	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.
0—1	0	0·09	0·015	0·08	0	0·07	0	0·07	0·013	0·07	0	0·07	0·010	0·08
1—2	0·201	0·38	0·145	0·34	0·164	0·30	0·239	0·31	0·102	0·31	0·147	0·29	0·145	0·33
2—3	0·653	0·67	0·490	0·59	0·454	0·53	0·612	0·55	0·414	0·55	0·462	0·51	0·487	0·57
3—4	0·865	0·94	0·626	0·84	0·563	0·75	0·718	0·78	0·576	0·77	0·685	0·73	0·648	0·80
4—5	1·009	1·20	0·990	1·07	0·840	0·98	0·846	1·00	0·749	0·99	0·866	0·92	0·907	1·03
5—6	2·000	1·46	1·025	1·29	1·041	1·19	1·022	1·22	1·005	1·20	1·093	1·12	1·106	1·25
6—7	2·727	1·69	1·420	1·52	1·222	1·39	1·184	1·43	1·173	1·41	1·293	1·31	1·430	1·46
7—8	2·569	1·92	1·823	1·73	1·320	1·59	1·285	1·63	1·521	1·61	1·422	1·50	1·730	1·66
8—9	2·770	2·14	1·790	1·93	1·548	1·77	1·570	1·82	1·728	1·79	1·601	1·67	1·839	1·86
9—10	2·423	2·34	2·610	2·07	1·910	1·95	2·149	2·01	2·385	1·98	1·927	1·84	2·373	2·05
10—14	2·747	2·81	2·745	2·58	2·538	2·38	2·473	2·44	2·505	2·41	2·348	2·24	2·620	2·48
15—19	2·911	3·54	3·172	3·32	3·314	3·11	3·298	3·16	3·105	3·12	2·952	2·92	3·120	3·20
20—24	3·372	4·00	3·775	3·87	3·780	3·68	3·930	3·73	3·524	3·66	3·478	3·42	3·653	3·73
25—29	3·847	4·18	4·090	4·21	4·279	4·08	4·427	4·09	4·261	4·01	3·712	3·77	4·075	4·06
30 and over	3·806	3·43	4·112	4·16	4·228	4·36	4·022	4·24	4·038	4·12	3·901	3·90	4·045	4·04

SUBSIDIARY TABLE IX-A.

Relationship of husband and wife (Musalmans), Attock District.

Caste.	Description of wives.	NUMBER OF WIVES OF SIMILAR *gotra* WITH RELATIONSHIP.									NUMBER OF WIVES OF DIFFERENT *gotra* WITH RELATIONSHIP.							TOTAL NUMBER OF WIVES OF SIMILAR AND DIFFERENT *gotras* WITH RELATIONSHIP.									REMARKS.
		First cousin.	Second cousin.	Third cousin.	Fourth cousin.	First cousin once removed.	First cousin twice removed.	Second cousin once removed.	No relation.	Total.	First cousin.	Second cousin	Third cousin.	First cousin once removed.	Second cousin once removed.	No relation.	Total.	First cousin.	Second cousin.	Third cousin.	Fourth cousin.	First cousin once removed.	First cousin twice removed	Second cousin once removed.	No relation.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
AWAN	First wife ..	72	2	4	1	13	1	..	12	105	(a) 9	2	(b) 1	(c) 3	..	(d) 41	*56	(a) 81	4	(b) 5	1	(c) 16	1	..	(d) 58	*161	*(a) Includes Rajput 1 and Maliars 2. (b) Includes Maliar 1. (c) Includes Khattars 2. (d) Includes Khattars 3, Jats 2, Maliars 8 and Rajputs 5.
	Second „	2	..	..	..	3	..	..	4	9	..	..	..	(a) 1	..	(b) 21	†22	2	..	..	..	(a) 4	..	..	(b) 25	†31	†(a) Includes Rajput 1. (b) Includes Khattar 1, Maliars 5, Mughal 1, Rajputs 2 and Sayad 1.
	Third „	..	..	..	..	..	..	..	1	1	..	..	..	1	..	‡3	‡4	..	..	..	..	1	..	..	‡4	‡5	‡Includes Rajput 1 „ Sheikh 1
	Fourth „	..	..	..	..	..	..	..	..	..	..	..	..	..	..	§1	§1	..	..	..	..	..	..	..	§1	§1	§Khattar 1.
MALIAR	First wife	48	7	2	..	6	..	..	16	79	4	1	..	..	..	24	29	52	8	2	..	6	..	..	40	108	
	Second „	..	1	..	..	1	..	..	1	3	..	..	..	..	..	*6	*6	..	1	..	..	1	..	..	*7	*9	*Includes Awan 1, Lohar 1 and Pathan 1.
	Third „	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	2	2	
QURESHI	First wife.	1	2	..	..	1	..	..	..	4	..	..	..	..	..	*1	*1	1	2	..	..	1	..	..	*1	*5	* Includes Arain 1.
RAJPUT	First wife ..	2	3	1	..	4	..	..	1	11	1	(a) 1	..	..	..	(b) 2	*4	3	(a) 4	1	..	4	..	..	(b) 3	*15	* (a) Includes Awan 1. (b) Includes Awans 2.
	Second „	..	1	..	..	..	..	..	3	4	..	..	..	..	..	†1	†1	..	1	..	..	..	..	..	†4	†5	†Includes Awan 1.
	Third „	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	
SAYAD	First wife ..	6	..	..	..	1	..	1	1	9	6	..	..	..	..	..	6	12	..	..	..	1	..	1	1	15	
	Second „	..	..	..	..	1	..	..	..	1	..	..	..	1	1	*2	*4	..	..	..	..	2	..	1	*2	*5	*Includes Awan 1. Maliar 1.

SUBSIDIARY TABLE IX-A.

Relationship of husband and wife (Musalmans), Attock District.

SUBSIDIARY TABLE IX-B.

Relationship of husband and wife (Musalmans), Muzaffargarh District.

SUBSIDIARY TABLE IX-B.

Relationship of husband and wife (Musalmans), Muzaffargarh District.

Caste.	Description of wives.	Number of wives of similar *gotra* with relationship. First cousin.	First cousin once removed.	Second cousin.	Second cousin once removed.	Third cousin.	Third cousin once removed.	No relation.	Total.	Number of wives of different *gotra* with relationship. First cousin.	First cousin once removed.	Second cousin.	No relation.	Total.	Total number of wives of similar and different *gotras* with relationship. First cousin.	First cousin once removed.	Second cousin.	Second cousin once removed.	Third cousin.	Third cousin once removed.	No relation.	Total.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
BILOCH	First wife ..	74	4	11	2	2	..	68	161	3	..	1	*23	*27	77	4	12	2	2	..	*91	*188	* Includes Jats 4, Thathiar 1, Tarkhan 1.
	Second ,, ..	2	1	1	1	..	1	6	12	..	..	..	†5	†5	2	1	1	1	..	1	†11	†17	† Includes Jat 1.
	Third ,, ..	..	1	..	..	..	..	1	2	..	..	..	1	1	..	1	..	..	..	..	2	3	
	Fourth ,, ..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	
PATHAN	First wife ..	2	3	..	..	..	..	6	11	..	..	..	*11	*11	2	3	..	..	..	..	*17	*22	* Includes Mughal 1.
	Second ,, ..	..	..	..	..	..	..	..	..	..	1	..	†5	†6	..	1	..	..	..	..	†5	†6	† Includes Bilochis 3 and Jat 1.
	Third ,, ..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	
	Fourth ,, ..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	
	Fifth ,, ..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	
QURESHI	First wife ..	16	..	..	..	..	..	5	21	(a) 1	..	..	(b) 5	*6	(a) 17	..	..	..	..	..	(b) 10	*27	*(a) Includes Biloch 1. (b) Includes Bilochis 2, Jats 2 and Sheikh 1. †Includes Ansaris 2.
	Second ,, ..	..	..	..	..	..	..	2	2	..	..	..	†2	†2	..	..	..	..	..	..	†4	†4	
SAYAD	First wife ..	2	..	..	..	..	..	..	2	..	..	..	*5	*5	2	..	..	..	..	..	*5	*7	*Includes Qureshis 2 and Pathans 2.
	Second ,, ..	..	..	..	..	..	..	..	..	..	..	..	†1	†1	..	..	..	..	..	..	†1	†1	†Caste different.

SUBSIDIARY TABLE IX-C.

Relationship of husband and wife (Musalmans), Gurdaspur District.

SUBSIDIARY TABLE IX-C.
Relationship of husband and wife (Musalmans), Gurdaspur District.

Caste.	Description of wives.	Number of wives of similar *gotra* with relationship.						Number of wives of different *gotra* with relationship.						Total number of wives of similar and different *gotras* with relationship.							Remarks.
		First cousin.	Second cousin.	Second cousin once removed.	Fourth cousin once removed.	No relation.	Total.	First cousin.	First cousin once removed.	Second cousin.	Second cousin once removed.	No relation.	Total.	First cousin.	First cousin once removed.	Second cousin.	Second cousin once removed.	Fourth cousin once removed.	No relation.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ARAIN	First wife ..	12	2	1	..	5	20	16	..	5	..	*40	*67	28	..	7	1	..	*51	*87	* Includes Sheikh 1.
	Second " ..	..	..	..	..	1	1	1	..	..	..	5	6	1	..	..	..	..	6	7	
GUJJAR	First wife ..	..	..	..	..	..	..	4	..	..	..	8	12	4	..	..	..	..	8	12	
	Second " ..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	2	2	
	Third " ..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	2	2	
	Fourth " ..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	
JAT	First wife ..	..	..	..	..	..	..	8	1	2	1	44	56	8	1	2	1	..	44	56	
	Second " ..	..	..	..	..	..	..	1	..	..	..	8	9	1	..	..	..	..	8	9	
	Third " ..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	
RAJPUT	First wife ..	2	1	..	..	7	10	5	..	..	..	15	20	7	..	1	..	..	22	30	
	Second " ..	..	..	..	..	..	..	..	..	..	..	†1	†1	..	..	..	..	..	†1	†1	† Pathan 1.
SAYAD	First wife ..	..	..	..	1	1	2	..	..	..	..	3	3	..	..	..	..	1	4	5	

SUBSIDIARY TABLE IX-D.

Relationship of husband and wife (Musalmans), Delhi Province.

SUBSIDIARY TABLE IX-D.

Relationship of husband and wife (Musalmans),Delhi Province.

Caste.	Description of wives.	Number of wives of similar *gotra* with relationship.						Number of wives of different *gotra* with relationship.					Total number of wives of similar and different *gotras* with relationship.						Remarks.
		First cousin.	Second cousin.	Third cousin.	First cousin once removed.	No relation.	Total.	First cousin.	Second cousin.	Third cousin.	No relation.	Total.	First cousin.	Second cousin.	Third cousin.	First cousin once removed.	No relation.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
JATS ..	First wife ..	..	..	..	..	..	..	..	..	..	40	40	..	..	..	..	40	40	
	Second „ ..	..	..	..	..	..	..	..	..	..	5	5	..	..	..	..	5	5	
	Third „ ..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	
MEOS (MEWATIS) ..	First wife ..	..	..	..	..	..	..	3	..	..	*48	*51	3	..	..	..	*48	*51	* Includes 1 Moghal.
	Second „ ..	..	..	..	..	..	..	..	..	..	*15	*15	..	..	..	..	*15	*15	* „ 1 Sheikh.
	Third „ ..	..	..	..	..	..	..	..	..	..	*3	*3	..	..	..	..	*3	*3	* „ 1 Faqir.
PATHANS ..	First wife ..	3	2	..	..	35	40	..	..	..	1	1	3	2	..	..	36	41	
	Second „ ..	..	..	1	..	9	10	..	..	..	*1	*1	..	..	1	..	*10	*11	* Includes 1 Sheikh.
SAYADS ..	First wife ..	4	2	1	2	21	30	*3	†2	‡1	§14	* † ‡ § 20	* 7	† 4	‡ 2	2	§ 35	* † ‡ § 50	* Qureshi 1. † Qureshi 1. ‡ Qureshis 2. § Qureshis 7 and Pathans 2.
	Second „ ..	..	..	..	..	4	4	*1	..	..	†1	5	*1	..	..	..	†8	* †9	* Qureshi 1. † Pathan 1 and Qureshis 3.
	Third „ ..	..	..	..	..	..	..	*1	..	..	*1	*2	*1	..	..	..	*1	*2	* Qureshis 2.
	Fourth „ ..	..	..	..	..	..	..	..	..	..	†1	†1	..	..	..	..	†1	†1	† Qureshi 1.

SUBSIDIARY TABLE X.

Authorised dates of Hindu Marriages for the Punjab, 1910—1921, as given by Pandit Devi Dial Jotshi

Number.	Year.	January.	February	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Remarks.
1	1910	30	..	4, 5, 7	..	11, 19, 20	3, 24, 25	22, 31	2, 9, 11, 27, 28	5, 6, 7, 8, 14	..	..	..	1. Two bars over any figure denote that there are two different times for the same date at which marriages may take place. 2. No Hindu marriage is permissible in the months of Chet, Katak and Poh, which nearly correspond to 13th March—13th April, 15th October—15th November, 15th December—15th January. Marriages are also prohibited during the time the planets Jupiter and Venus are invisible.
2	1911	19, 20	$\overline{\overline{3}}$, 4, 15, 22, 23	3	18, 21, 30	9, 18, 24, 29	5, 20	18, 21, $\overline{\overline{22}}$, 23, 29, $\overline{\overline{30}}$	7, 8, 13, 24	2, 4, 5, 29	1, 2	..	..	
3	1912	16, 24, 25	5, $\overline{\overline{6}}$, 7	..	20	1, 17, $\overline{\overline{18}}$, 19, 26	..	..	17, 18, 19, 20, 23	4, 5, 17, 18, 19, 20, 21	12	25, 26	..	
4	1913	25, 26	14, 15	2	..	14, 20, 23, 24, 25	5, 19	12, 28, 29	4, 8	2, 4	3	23	..	
5	1914	..	..	..	27	12, 19, $\overline{\overline{20}}$, 21	3, 6, 16, 17	14	23, 27, 31	1, 21, 24, 28	..	..	10	
6	1915	20, 21	4, 8	..	..	16	6, 7, 22	26, 30, 31	..	..	..	23	2	
7	1916	29	6, 26, 27	5	..	3, 4, 5, 26, 27	12	25	3, 21, 31	6	1	17, 18, $\overline{\overline{20}}$, 21	..	
8	1917	14, 15, 27, 28	15	..	..	..	24, 28	10, 24, 28, 29	2, 6, 7, 11, 13	18, 21, 26	..	..	7, 10	
9	1918	..	1	..	..	11, 17, 25	..	14	2, 7, 9, 10, 11, 13, 20	7, 9, 10	..	..	..	
10	1919	$\overline{\overline{21}}$	5, 24, 25	4, 5	20, 23	19, 25, 26	6, 7, 9, 21, 22	..	14, $\overline{\overline{15}}$, 27, 30, 31	3, 25	1, 3, 4, 13	20, 24	7	
11	1920	25, 26, 27	7, 8	..	22, 23, 29	7, 14, 15, $\overline{\overline{19}}$, 24	..	..	..	..	..	..	..	
12	1921	..	..	..	..	4, 5, 9	..	..	21, 22, 26, 27	...	9, 10	16, 17, 18, 30	1	

CHAPTER VIII.

Literacy.

SECTION. I.—GENERAL LITERACY.

142. Reference to statistics. 143. Definition of Literacy. 144. Extent of Literacy. 145. Local distribution of Literacy. 146. Literacy by districts. 147. Literacy by Natural Divisions. 148. Literacy by cities and towns. 149. Literacy by religions. 150. Effect of the proportions of Hindus and Musalmans in the total population on the literacy of each community. 151. Literacy by castes. 152. Literacy by occupations.

SECTION II.—LITERACY AND THE STATISTICS OF THE EDUCATION DEPARTMENT.

153. Adult literacy. 154. Literacy in Schools, and extra-scholastic literacy. 155. The numbers required to replace loss of literates by death. 156. Speculative increase in male literacy in British Territory during the decade 1921-31. 157. Expansion of Education since 1901.

Section I.—General Literacy.

Reference to Statistics. 142. The figures for education by religion and age are given in Imperial Table VIII; Part A containing the provincial summary, Part B details for districts and States and Part C details for cities and selected towns, and Imperial Table IX, which gives the details of education by certain selected castes, tribes and races. While the Imperial Tables give the absolute figures, the data giving the proportionate amount of literacy *per mille* of population are contained in the Subsidiary Tables.

Subsidiary Table I gives the literacy *per mille*, by 4 age-groups, by sex and religion for the Punjab and Delhi separately.

Subsidiary Table II gives the number of literates *per mille* by age, sex and locality for each district, State and natural division.

Subsidiary Table III gives the literacy *per mille* by religion, sex and locality for each district, State and natural division.

Subsidiary Table IV gives the same information as Subsidiary Table III for English literacy.

Subsidiary Table V gives the variation in literacy in each of the 5 censuses since 1881—1921 for males and females separately, and for the 3 age-groups 10—14, 15—19 and 20 and over for each district, State and natural division.

Subsidiary Table VI gives the number of literates *per mille* for each caste, and also literates in English per 10,000 of population.

Subsidiary Table VII shows the growth in the number of educational institutions, scholars and expenditure from 1889-90 to 1920-21, based on the returns of the Education Department, Punjab.

Definition of Literacy. 143. The instruction contained on the cover of the enumeration book for the 1921 Census, read as follows :—

> " Column 14—(Literate or illiterate)—Enter against all persons, who can both read and write any language, the word 'literate'; against persons who cannot read and write any language make a cross in this column."

The supplementary instructions to supervisors, given in Appendix I to the Code of Census Procedure of the Punjab 1921, read as follows :—

> " Column 14—A person should not be entered as literate unless he can write a letter to a friend and read the answer to it."

Except for verbal alterations these instructions are exactly the same as those given in 1911, and as pointed out in paragraph 413 of the last Census Report, the definition adopted in the 1911 and 1921 censuses demands a higher standard of literacy than did the instructions at the Censuses of 1881, 1891 and 1901. Comparison of the figures of literacy, therefore, between the last two Censuses of 1911 and 1921 with the literacy obtaining at any of the 3 previous censuses will be misleading. Comparison between the returns of literacy for the 1911 and 1921 Censuses will, however, be feasible, provided no insistence is made on minor differences, which may be the result of inaccurate returns.

Extent of literacy. 144. Out of a total population of 25,101,060 persons in the Punjab, 967,943 persons, comprising 882,537 males and 85,406 females, were returned as literate in the present census. In the Delhi Province, out of a total of 488,188 persons, 52,458 persons, comprising 45,389 males and 7,069 females, were returned as

literate. Of the total population of age 5 and over, the numbers of literate persons in the Punjab were 45 *per mille*; of literate males 74 *per mille*, and of literate females 9 *per mille* : the corresponding figures for the Delhi Province were 122 *per mille* of literate persons, 180 *per mille* of literate males and 40 *per mille* of literate females. The proportion of literacy, therefore, in the Delhi Province is nearly 3 times that of the Punjab, a circumstance associated with the fact that out of a population of about 488,000 in the Delhi Province, no less than 304,000 live in Delhi City itself. Of the literate males in the Punjab, 16 per cent. and of literate females 14 per cent. are literate in English. In the Delhi Province, the percentage of literates in English, out of the total number of literate persons, is 31 per cent. for males and 26 per cent. for females. Comparison of the number of literates and of literates in English *per mille* for 1911 and 1921 is given in the marginal table.

Territorial Division.	Literate.				Literate in English.			
	1911		1921.		1911.		1921.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
British Territory ..	65	6	67	8	9	1	11	1
Native States ..	51	3	52	4	3	..	5	..

145. Diagrams 46 and 47 show the local distribution of literacy in the Punjab; the curves of these maps separating regions of literacy of below 50 *per mille* for males from regions where literacy for males exceeds 50 *per mille.* These diagrams are based on Tahsil and State figures of literacy and, therefore, most of the kinks, which it may be noticed, are very numerous in the isopleths for 1911, are representative of local variations in literacy, *as indicated by the returns.* Both the diagrams for 1911 and 1921 present the same general features, that is to say, that a relatively high standard of literacy obtains in a great part of the North-West of the Punjab and in its Eastern and Central regions: but between these two regions there is an unexpected strip with a low proportion of literates which covers parts of the Sialkot, Amritsar, Lahore, Sheikhupura, Ferozepore and Montgomery districts, in which literacy is below 50 *per mille.* There is another region of low literacy which is mainly comprised in the districts of Hissar, Rohtak and Karnal.

Local Distribution of Literacy.

DIAGRAM 46

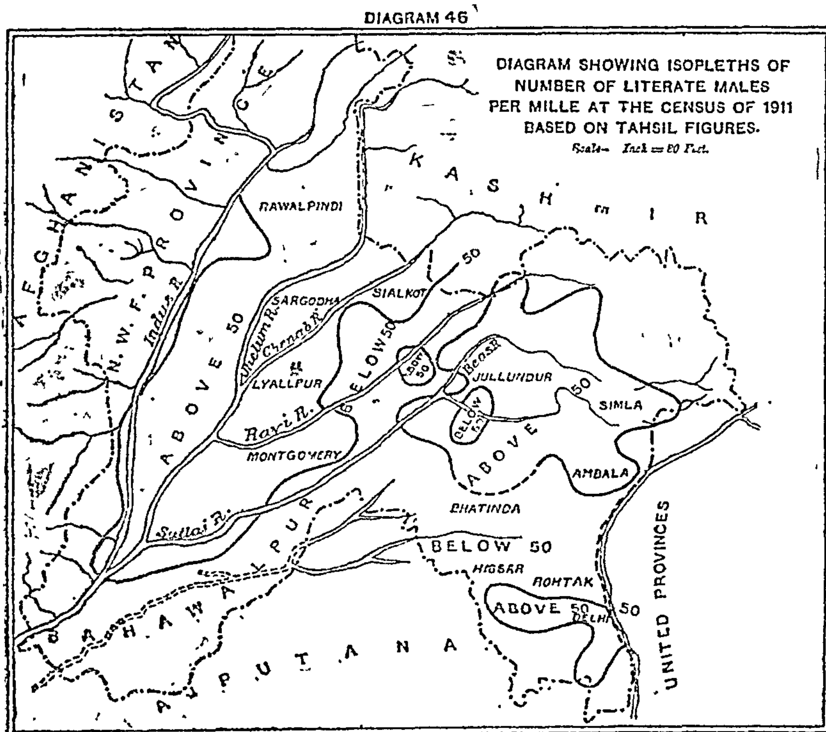
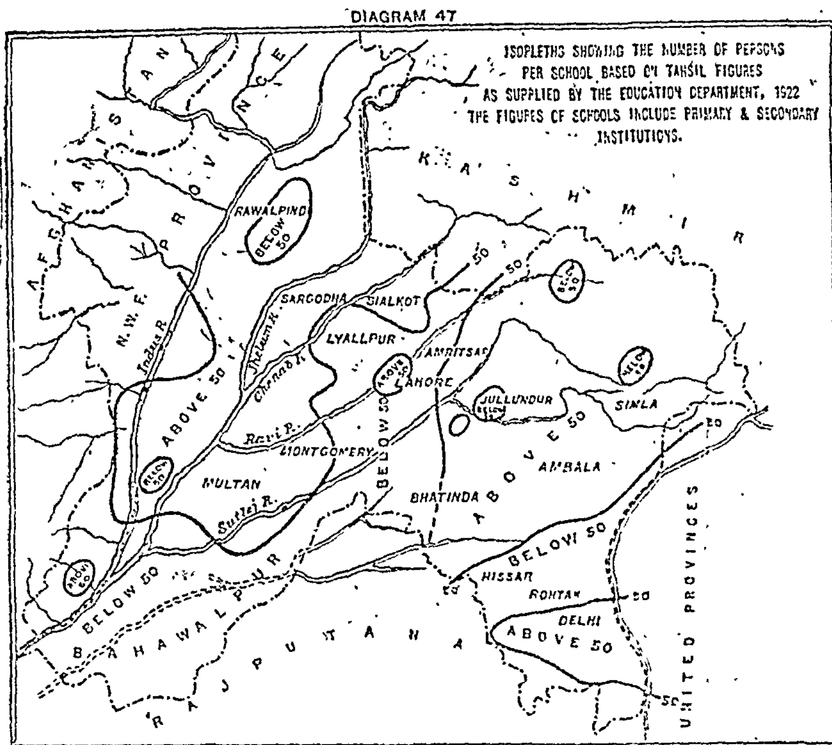
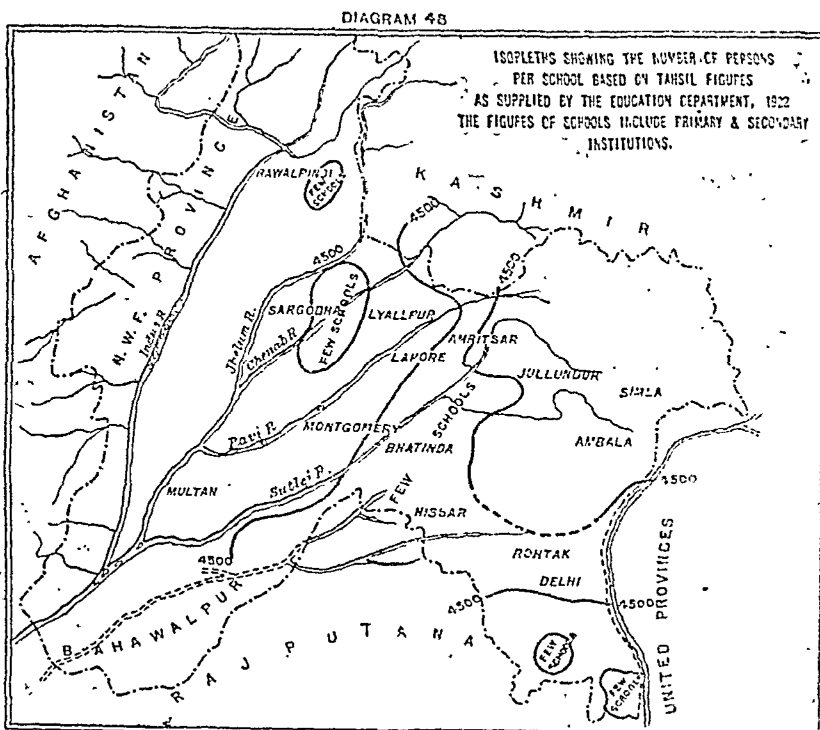


DIAGRAM 47



The main features of the distribution of literacy in various tahsils of the province, as is exhibited by diagrams 46 and 47, are readily explicable by reference to a map of the Punjab showing the parts of the Province in which there are few or many schools per head of population. A diagram (No. 48) showing the population served by each school has been drawn and is reproduced below—

DIAGRAM 48

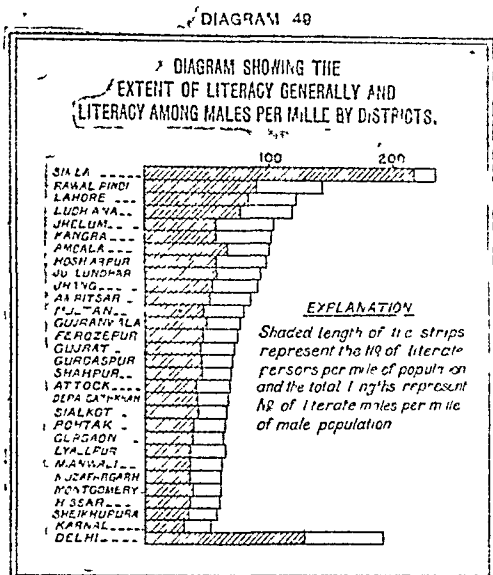


It will be observed that the area in which there are more than 4,500 persons per school in the centre of the Punjab corresponds fairly closely with the area in diagram 47 in which the literacy falls below 50 *per mille*. Similarly, there are more than 5,500 persons per school in the Bhiwani tahsil, included in the area of low literacy which sweeps across Hissar and Rohtak: but, conversely, although there are few schools in the tahsils of Bhalwal, Phalia, Hafizabad and

Chiniot, this is an area in which literacy exceeds 50 *per mille.* Naturally the mere number of schools in any tahsil is not an exact index of the number of literates to be expected in the general population, and on the whole it is surprising to find such a close correspondence between the two sets of figures as is exhibited by diagrams 47 and 48. The figures for the number of schools are those supplied to me by the courtesy of Mr. G. Anderson, Director of Public Instruction, Punjab, and apply to the year 1921-22.

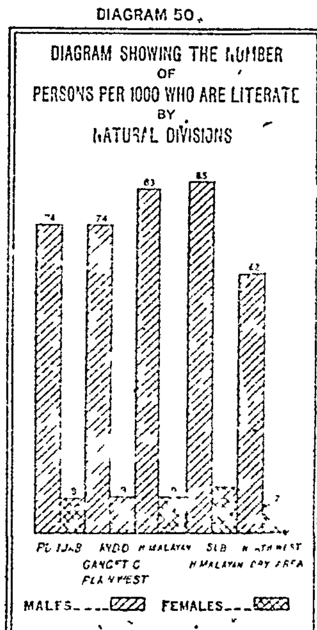
Literacy by Districts.

146. The diagram given in the margin shows the extent of literacy generally, and of literacy among males *per mille* by districts, the falling away of the curves for male literacy and for literacy generally being roughly concurrent, as might be expected in view of the fact that male literacy is over 8 times the extent of female literacy. The extent of literacy in the first 3 districts, namely, Simla, males 211 and females 156 *per mille ;* Rawalpindi, males 120 and females 19 *per mille* ; and Lahore, 100 *per mille* for males and 23 *per mille* for females, is due to exceptional circumstances. Simla contains a very large proportion of Europeans and educated Indians, Rawalpindi has a very large Cantonment, and Lahore is the educationl centre of the Punjab. Karnal, Sheikhupura and Hissar are the most backward districts in the Punjab, Sheikhupura being but a newly created district, and Hissar and Karnal remote from the capital of the province. Lyallpur with 52 males and 6 literate females *per mille* is strikingly backward in spite of the fact that it fairly bristles with schools except in the Chiniot Tahsil.



Literacy by Natural Divisions.

147. The diagram given in the margin shows the proportionate literacy for males and females by natural divisions, the Sub-Himalayan Area coming first, and the North-West Dry Area last in the proportion of literates, both male and female. It would be a far cry to correlate the extent of literacy with geological formation or climatic conditions. No diagram is given to indicate the extent of English literacy by natural divisions, and the following observations must suffice. Among males the Sub-Himalayan tract with 155 literates per 10,000 comes first. The Indo-Gangetic Plain with 128 literate males, the Himalayan with 85 literate males, and the North-West Dry Area with 70 literate males per 10,000 follow in the order named. As regards females the Himalayan Area with 26 per 10,000 comes first, closely followed by the Indo-Gangetic Plain with 25 per 10,000. The Sub-Himalayan Area comes next with 16 literate females per 10,000 and the North-West Dry Area is the last with only 4 females literate in English per 10,000 of population. The marginal table will show that the extent of English male literacy is largely dependent on the presence or absence of Cantonments which usually contain a considerable number of European troops.



Natural Division.	Number of literate males per 10,000 for ages 5 and over.	Number of canton-ments.
Sub-Himalayan	155	10
Indo-Gangetic Plain	128	4
Himalayan	85	4
North-West Dry Area	70	1

Literacy by Cities and Towns.

148. The marginal table shows the literates *per mille* for certain cities and selected towns. As compared with 66 literate males and 8 literate females in the province as a whole, the 8 cities and selected towns of the Punjab provide us with 213 literate males and 64 literate females *per mille* and this is an indication of the greater extent of literacy which obtains in urban as compared with rural areas. The reasons for this need no elaboration.

City or Town.	Literate *per mille*.	
	Males.	Females.
Ambala	275	62
Ferozepore	248	78
Lahore	244	97
Sialkot	234	59
Jullundur	223	63
Delhi	208	49
Rawalpindi	199	87
Amritsar	158	18
Multan	114	31

Literacy by Religions

149. The marginal table gives the number of literates by religion and sex *per mille* at the Censuses of 1911 and 1921. Hindu, Musalman, and Jain religions show an increase in literacy both male and female, while a decrease is exhibited by the Christian religion: Sikhs have remained almost exactly in the same state of literacy as they were in 1911. The decrease of literacy among Christians is undoubtedly due to the inclusion among their number of a large proportion of converted low-caste Hindus and Musalmans. The greatest relative advance is that made by the Musalman community, but it is still very backward in education, and will have to make up a great deal of leeway before it approaches the standard of literacy among Hindus. The educational stagnation of the Sikhs is possibly due to a real increase in literacy combined with a diminution arising from the conversion of the comparatively illiterate Mazhabi to the ranks of Sikhism. However this may be, the fact remains that Sikhs, who were equal to Hindus in literacy in 1911, have now fallen some way behind them. Another factor in the situation is possibly the fact that a knowledge of Gurmukhi is not a key to any Government appointment in the same way as the Urdu language is, and this may to some extent explain the growing neglect of the national language of the Sikhs. From among Christians, Europeans are almost universally literate, the numbers being 905 *per mille* for males and 933 *per mille* for females, for ages 5 and over, while among Indian Christians the corresponding numbers are only 46 and 34 *per mille*. Among the religious communities which only supply a very small fraction to the total population of the province, namely, the Parsi, the Jew and the Buddhist, a very high standard of literacy prevails. Parsis have 723 literate males *per mille*, and 746 literate females *per mille*. Jews have 273 males and 286 females *per mille*, and Buddhists 206 literate males and 18 literate females *per mille*. The 3 communities, the European Christian, Parsi and Jewish differ from all the other religious communities of the province in possessing a greater proportion of literate females than literate males.

Religion.	1911.		1921.	
	Males.	Females.	Males.	Females.
All religions ..	63	8	74	9
Hindus	95	7	113	18
Sikhs	94	12	93	13
Jains	464	24	506	47
Musalmans ..	27	2	37	4
Christians	235	125	140	93

Effect of the proportions of Hindus and Musalmans in the total population on the literacy of each community.

150. A very striking relationship between the percentage of Hindus in the various districts of the province and the percentage of literacy among Hindus may be noticed.* The association is this: As the percentage of Hindus in the total population diminishes in going from one district to another so the percentage of literacy among Hindus increases, although the increase of literacy does not bear a linear relationship to the diminution of the percentage of Hindus in the total population. Thus in every district in which the percentage of Hindus lies between 60 and 100 the percentage of literacy is about 5 or 6; but in districts with less than 10 per cent. of Hindus the percentage of literacy among Hindus is over 25 per cent.

The most probable explanation of this, suggested by Sheikh Abdul Majid, my Personal Assistant, is that in those districts in which there is a large proportion of Hindus, most of them will be found to be engaged in agriculture, whereas in the districts with relatively few Hindus most of them will be engaged in trades or professions. For Musalmans a similar relationship obtains, that is to say, the proportion of literate Musalmans is greater in those districts where there

(*My attention was drawn to this fact by Mr. Abdul Majid, M. A., my Head Computer.)

are few of them than in districts where there are relatively more Musalmans: but the percentage of literacy among Musalmans does not rise above 10, even in those districts where there are less than 5 per cent. of Musalmans. Considerations of time and economy prevent the reproduction of the very interesting diagrams which illustrate the foregoing argument.

151. The absolute figures of literacy by caste are given in Imperial Table IX, while the proportions per 1,000 of literates, and per 10,000 for literates in English are given in Subsidiary Table VI for 1911 and 1921. Imperial Table IX is particularly useful because it differentiates Hindus, Sikhs, Musalmans and Jains in each caste; the absence of this differentiation in some of the caste tables is a fruitful source of errors of interpretation, as there are so few castes, especially among predominantly Hindu and Sikh castes, which do not contain a large proportion of persons belonging to other religious communities.* — **Literacy by Castes.**

The castes which show the highest proportion of literates are shown in the margin. It will be noticed, that there has not been much change in the relative position of the castes since 1911, the predominantly Hindu castes being far superior in literacy to the Musalmans.

Caste.	1921.	1911.	Caste.	1921.	1911.
Khatri ..	231	250	Sheikh ..	87	74
Aggarwal ..	209	212	Sunar ..	82	80
Arora ..	172	210	Khoja ..	57	58
Brahman ..	122	113	Pathan ..	57	53
Sayad ..	97	83	Moghal ..	53	49
Qureshi ..	92	77			

The castes with a proportion of less than 10 *per mille* of literates for 1921 are as follows:—

Bawaria ..	2	Dogar ..	6	Malliar ..	6
Bharai ..	6	Dumna ..	5	Mallah ..	5
Baloch ..	9	Harni ..	3	Meo ..	6
Chamar ..	5	Kumhar ..	5	Mochi ..	6
Chuhra ..	2	Machhi ..	4	Mussalli ..	1
Dagi and Koli ..	5	Mahtam ..	4	Teli ..	7
Dhanak ..	2	Mali ..	6		

These castes are nearly all low in the social scale, and are engaged in menial occupations or crime. The castes which show a relatively large proportion of female literates are the Khatri (60), Arora (29), Sheikh (25), Sayad (23) and Qureshi (22).

152. The figures of literacy by occupation for the Censuses of 1891, 1911 and 1921 are given in the table noted below— **Literacy by occupations.**

NUMBER OF LITERATES PER 1,000.

Serial No.	Caste.	1891	1911	1921	Serial No.	Caste.	1891	1911	1921
I	AGRICULTURE ..	14	19	23	V	ARTISANS	20	26	26
1	Arain	7	11	17	1	Chhimba	19	28	33
2	Awan	14	13	20	2	Kashmiri	17	34	39
3	Ghirath	8	11	16	3	Lohar	11	14	17
4	Jat	13	17	19	4	Nai	10	13	16
5	Kamboh	12	16	15	5	Sunar	76	80	82
6	Labana	10	23	30	6	Tarkhan	15	23	23
7	Moghal	30	49	53	VI	CRIMINAL TRIBES ..	2	3	3
8	Pathan	41	53	57	1	Bawaria	2	4	2
9	Rajput	12	26	33	2	Harni	2	3	3
10	Saini	15	26	35	3	Pakhiwara	..	3	17
II	PRIESTS AND DEVOTEES	97	107	117	VII	OTHERS	7	10	13
1	Brahman	102	113	122	1	Barwala	5	7	11
2	Sayad	71	83	97	2	Bharai	2	4	6
III	HUNTERS (MAHTAM) ..	4	9	4	3	Jhiwar	6	11	12
IV	TRADERS	178	191	177	4	Jogi-Rawal	17	24	43
1	Arora	203	210	172					
2	Khatri	218	250	231					
3	Sheikh	62	74	87					

and it indicates that the greatest advance in literacy in the last 40 years has been made by agriculturists; artisans come next.

Section II.—Literacy and the Statistics of the Education Department.

153. A boy or girl at school, even when literate, is only potentially important: so the value of any system of education is to be tested by the efficiency of — **Adult Literacy.**

*Among Sikhs practically the only important caste which is composed almost exclusively of Sikhs, is the Ramgarhia, and even in this there are a certain number of Hindus: these have recently been claiming to be excluded from the caste on the ground that they are really Dhiman Brahmans. The matter is dealt with in Chapter XI.

the adult members of the Community. If, therefore, literacy in the census meaning of the word and social efficiency are correlative, the Punjab has bettered itself but slightly during the last decade. In 1911 from among 7,038,795 males over the age of 20 in the Punjab and Delhi 665,453 were literate. In 1921 out of 7,308,792 males over 20 in the Punjab and Delhi 705,683 were literate. Thus literacy among adult males rose from 9·45 to 9·65 per cent. during the decade. The difference between these two figures, 0·20 per cent., is less than twice the probable error of the difference, namely, 0·135,* so that however much we may expect adult literacy to have increased in the 10 years between 1911 and 1921, we are not justified in concluding that it has done so, except for reasons other than those based on the census returns.†

Literacy in Schools, and extra-Scholastic Literacy.

154. It is desirable to examine the figures for literacy in schools, both in order to determine the extent of extra-scholastic literacy, and also with a view to estimating the likelihood of the extension of literacy in the Province and of the proportion of adult literates which is likely to result in future years from a given yearly outturn of literate scholars by the Education Department.‡ Though there is not complete unanimity, the consensus of opinion in the Department is in favour of treating one-third of the 4th Primary and all of the 5th Primary classes in 1911 as literate; while in 1921, when the old 5th class had ceased to be a Primary class, two-thirds of the 4th Primary class are to be regarded as literate. We obtain then the following estimate of the number of literate persons (males and females) in Departmental Schools.

	1910-11.	1920-21.
Fraction of IV Primary scholars; ⅓ in 1911: ⅔ in 1921	33,000	30,976
Scholars in classes above IV Primary in schools and colleges	42,402	99,431
Total literate scholars	75,402	130,407
Literates under 20 years old according to Census (British Territory, including Delhi Province in 1911 excluding Delhi in 1921)	174,684	220,640
Extra-scholastic literates, below 20	99,282	80,233
Literates in British Territories	774,845	833,492
Extra-scholastic literates of all ages	699,443	703,085

Thus while extra-scholastic literates below 20 have decreased by 19,000 persons, consequent on the closing down of many private educational institutions during the decade, there has been a very slight increase in the numbers of extra-scholastic literates of all ages. The results suggest that the efforts of the Department of Education to increase the literacy of the Province have been almost completely nullified by the diminution in private educational enterprise. It is not surprising, therefore, to find that "effective" male literacy, which we may regard as a touchstone of the utilitarian value of education has advanced only from 9·45 to 9·65 per cent. for the whole of the Punjab and Delhi. The relevant figures are noted in the margin.

Literate Males over 20 for the Punjab and Delhi.

	1911.	1921.
Punjab ..	665,453	670,000
Delhi ..	..	35,683
Total ..	665,453	705,683

Total Males over 20 for the Punjab and Delhi.

	1911.	1921.
Punjab ..	7,038,795	7,144,124
Delhi ..	..	164,668
Total ..	7,038,795	7,308,792

The numbers required to replace loss of literates by death.

155. Taking the figures of Life Table P for the Punjab, for males, as given in the Actuarial Report on page 187 of Volume I, Chapter V of the Census of India Report for 1911, we see that out of a population of 2,122,761 males, 41,738 enter their 20th year of age each year: so that by a simple sum in proportion we find that out of 11,306,265 males in British Territory in 1921, 222,305 males will attain their 20th birth-day each year.

*Assuming that the probable error of the returns for the percentage of literates is 1 per cent. for either census, the probable error of the difference of two figures of 9·5 per cent. is $\sqrt{2} \times 0{\cdot}095 = 0{\cdot}135$. The assumption of a probable error of 1 per cent. does not seem excessive in view of the vagueness of the test question, apart from the errors arising from complete omissions.

† Of literates over 20 a small population will be scholars and collegians, and these might be excluded in estimating the number of adult literates who are "effectives" so far as the community is concerned. From the very interesting "Report on the Progress of Education in the Punjab during the quinquennium ending 1921-22" it may be found (*vide* General Table X, pages LII and LIII) that there were 3,272 pupils over 20 in schools and Arts Colleges. Of these 277 were in the Primary classes, leaving almost exactly 3,000 literate scholars over 20.

‡I must make acknowledgment of the great courtesy and assistance received from Mr. G. Anderson, Directo of Education, Mr. Tydeman, Mr. Maqbul Shah and other Officers of the Department, both in supplying me with the necessary statistics and in discussing their bearing on the census figure 'literacy.

This is equivalent, in a "stationary" population, to saying that 222,305 males over the age of 20 die each year. Now the proportion of literate males over 20 to the total number of males over 20 is for British Territory, 1 to 10·311, so that assuming there is no differential death-rate adverse or favourable to literate males as contrasted with illiterate males, the number of literate males over 20 who die each year is 21,560.

Roughly speaking then, British Territory in the Punjab will require 22,000 literate males of the age of 20 to be turned out each year, in order to maintain the present standard of 9·7 per cent. of male literates over the age of 20.

In order to maintain a standard of 20 per cent. of literates among males over twenty years of age, it would be necessary to turn out about 45 thousand literate males each year. As the Education Department actually produces 47,000* literate males each year, it would, if its efforts are maintained *pro rata* with the increase in population,† secure the eventual attainment of 20 per cent. of male literacy in British Territory in the Province, provided that relapses into illiteracy are not too common. As some educational authorities admit, there is a great proportion of boys who have passed through the primary schools, who are scarcely literate at the moment of their leaving school; these must relapse into illiteracy in a very short time. Some quotations from the admirable "Report on the Progress of Education in the Punjab during the Quinquennium ending 1921-22" may be permitted. The Inspector of Schools, Ambala Division, writes—

"The boy that passes out of the present day Primary school can hardly be termed literate. He is not even able to carry on correspondence with ease. The parent in the village finds that his boy has gained no accomplishment worth having as a result of four years' or even longer stay at school."

Sardar Bishen Singh writes—

"The existing curriculum, overburdened as it is,....... This coupled with the four class school, has made the boy more liable to relapse into illiteracy."

It seems probable, therefore, that even when the Department is in a position to turn out 60,000 literate boys per annum, the percentage of relapse will always be high. In the argument that follows we will assume that the Education Department is only able to produce 50,000 males of the age of 20 who will be permanently literate.

Speculative increase in male literacy in British Territory during the decade 1921-31.

156. It is perhaps worth while to hazard an estimate of the increase in literacy among males over 20 in British Territory, on the assumption of the production of 50,000 stably literate males annually during the next decade. The figures in the margin show the numbers of the literate males of 20 years of age produced year by year who will be alive in 1931.

	Survival rate.	Survivors.
1921 ..	0·794	39,700
1922 ..	0·815	40,700
1923 ..	0·835	41,700
1924 ..	0·856	42,800
1925 ..	0·877	43,800
1926 ..	0·898	44,900
1927 ..	0·918	45,900
1928 ..	0·939	46,900
1929 ..	0·959	47,900
1930 ..	0·980	49,000
		443,300

To this number 443,300, have to be added the survivors in 1931 of the existing male literates of 20 years age and over; these now number 566,323. Adopting the figures of Life Table P we find that a proportion of 0·656 of them will be alive in 1931. This gives 371,508 survivors of males who were literate prior to 1921, and the total number of male literates over 20 in British Territory will be constituted as follows:—

Survivors in 1931 *of male literates over* 20 *in* 1921 ..	371,508
Literates produced during the decade 1921-1930 *and alive in* 1931. ..	443,300
Total ..	814,808

Assuming an increase of population at the rate of 5·5 per cent. during the decade the number of males above 20 in 1931 will be 6,161,000, so that

*This is the number of students in the 4th Primary class according to General Table X, page LII of the Report on the Progress of Education in the Punjab for 1920-21. Mr. Anderson, the Director of Education, informs me that his Department expects to turn out an average of 60,000 literates annually during the next decade.

†The present annual increment of population is about 0·55 per cent.

the percentage of male literacy for males over 20 years of age in British Territory will be then 13·2 per cent., as compared with a figure of 9·7 per cent. in 1921.

Too many assumptions are involved to make this prediction of any great certainty, but it does at least afford guidance as to the probable increase of literacy during the next decade consequent on a given educational policy. In particular, if in future years there are less than the assumed annual number of relapses into illiteracy of 10,000 per annum, or a greater outturn of initially literate persons the resultant literacy at the Census of 1931 will be in excess of the 13·2 per cent. calculated above, and *vice versa*.*

Expansion of Education since 1901.

157. I close the chapter by giving two diagrams, which illustrate the growth of the number of scholars and in the expenditure of the Education Department during the last 20 years. Before attempting to discuss the relative increase of expenditure and of the number of scholars, it would be necessary to correct the former figures for the change in the purchasing power of the rupee, and thus the enquiry would lead us too far afield to be pursued any further here. Mention may however be made of the calculation by the present writer of an index number of prices based on the Lahore wholesale prices of 24 leading commodities which shows that prices have increased from 100 in the year 1910—14 to 202 in 1921. Since then there has been a marked fall in prices, but even so, more must not be expected from an expenditure of three rupees at the present time than from two rupees before the war. While therefore expenditure on Education expressed in rupees has trebled in the 10 years 1910-11 to 1920-21, the effective expenditure expressed in purchasing power is now probably only about double what it was 10 years ago. Progress during the next decade will indicate to what extent the community is getting a return for its increasing outlay.

DIAGRAM 51.

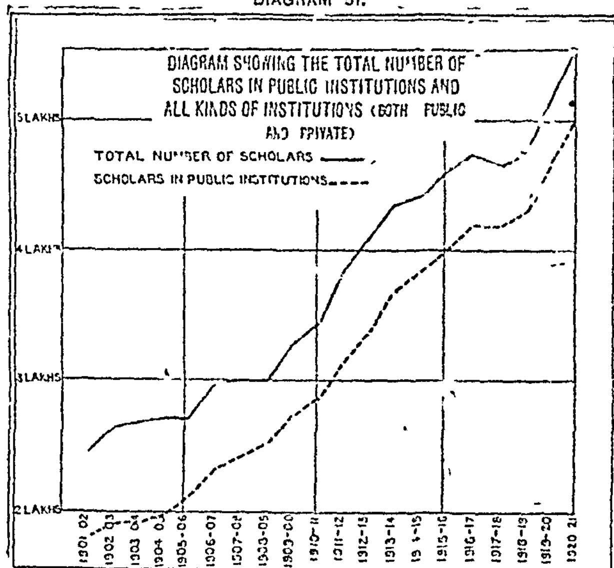
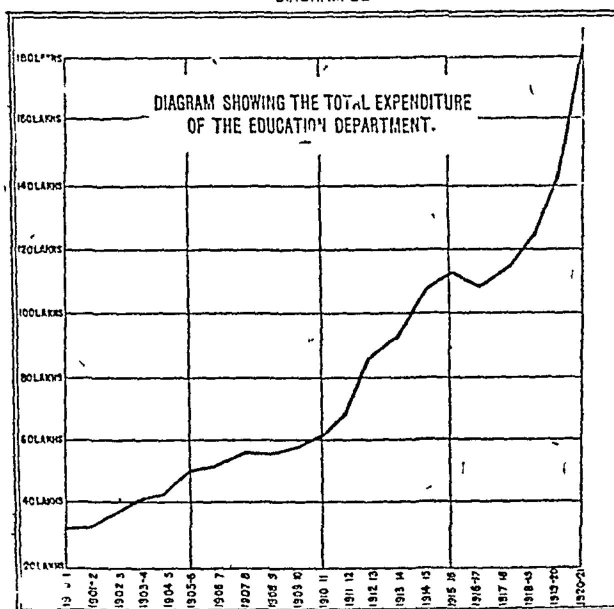


DIAGRAM 52



*The numerical dependence of the amount of literacy on the number of scholars is exhibited by a correlation co-efficient of 0·507, obtaining between the ratio of male scholars to male population between 5—15 years and the number of literate males *per mille* of males for each Punjab district.

The co-efficients of variation from district to district of the ratio of scholars to population, and of the *per mille* number of literate males, are almost exactly the same, being 28·3 and 27·4 per cent. respectively.

I. Literacy by age, sex and religion (Punjab and Delhi). II. Literacy by age, sex and locality. III. Literacy by religion, sex and locality. IV. English literacy by age, sex and locality. V. Progress of education since 1881. VI. Literacy by caste (Punjab and Delhi). VII. Showing the growth in the number of educational institutions, scholars and expenditure from 1889-90 to 1920-21 from the returns of the Education Department, Punjab.

SUBSIDIARY TABLE I.

Literacy by age, sex and religion.

Religion.	Number *per mille* who are literate.											Number *per mille* 5 and over who are literate in English.		
	All ages 5 and over.			5—9 (*inclusive*).		10—14 (*inclusive*).		15—19 (*inclusive*).		20 *and over.*				
	Total.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PUNJAB.														
ALL RELIGIONS.. ..	45	74	9	6	2	53	12	98	17	94	9	7	12	1
Hindu	68	113	11	9	3	82	15	144	21	142	10	9	16	1
Musalman	22	37	4	3	1	29	5	52	8	48	4	3	6	..
Christian	120	140	9	32	44	73	105	144	119	189	103	96	116	69
„ (European, etc.) ..	914	905	932	Not available.								862	888	822
„ (Indian)	40	46	34									19	22	16
Buddhist	113	206	18	..	..	53	..	146	16	271	23	8	15	..
Jain	296	506	47	34	15	334	76	567	73	653	44	30	55	1
Sikh	59	93	13	5	2	69	19	116	27	117	13	7	11	..
Parsi	732	723	740	474	273	643	720	643	750	766	831	580	623	513
Jew	278	273	280	..	..	..	..	..	..	375	500	222	273	143
DELHI.														
ALL RELIGIONS ..	122	180	40	32	21	122	41	190	55	217	42	37	57	10
Hindu	99	150	26	22	11	114	30	176	38	177	27	26	43	2
Musalman	120	182	34	29	10	110	37	176	48	227	32	23	39	2
Christian	501	563	411	254	375	274	333	478	398	644	436	418	491	306
„ (European, etc.) ..	843	806	969	Not available								843	806	969
„ (Indian)	287	324	249									152	188	115
Buddhist	1,000	1,000	1,000	..	1,000	..	..	1,000	..	1,000	1,000	333	333	333
Jain	466	699	162	193	4	584	92	753	254	798	101	82	139	9
Sikh	517	610	247	273	176	333	271	538	418	684	229	155	195	47
Parsi	855	833	905	286	..	1,000	750	666	1,000	943	1,000	652	667	619
Jew	412	500	364	..	..	..	..	..	500	1,000	500	353	500	273

SUBSIDIARY TABLE II.

Literacy by age, sex and locality.

District or State and Natural Division.	Number *per mille* who are literate.										
	All ages 5 and over.			*5—9 (inclusive).*		*10—14 (inclusive).*		*15—19 (inclusive).*		*20 and over.*	
	Persons.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
PUNJAB	45	74	9	6	2	53	12	96	17	94	9
I.—Indo-Gangetic Plain West	45	74	9	5	2	51	12	92	17	94	9
1. Hissar	32	57	3	3	1	33	3	76	6	77	3
2. *Loharu State*	9	14	2	9	..	14	6	18	4	15	2
3. Rohtak	35	61	3	4	1	48	3	78	5	79	4
4. *Dujana State*	20	38	1	..	..	13	..	51	2	53	1
5. Gurgaon	35	61	4	5	1	45	4	69	7	80	4
6. *Pataudi State*	38	68	3	2	1	45	2	55	0	94	3
7. Karnal	28	48	4	3	1	25	4	55	6	65	4
8. Jullundur	54	87	13	..	..	87	20	137	28	101	12
9. *Kapurthala State*	40	67	7	..	..	56	9	87	12	83	8
10. Ludhiana	72	113	18	..	..	116	34	160	38	131	17
11. *Malerkotla State*	46	75	5	..	..	53	7	77	6	95	6
12. Ferozepore	43	70	9	..	..	48	13	92	19	93	9
13. *Faridkot State*	41	69	4	..	..	25	3	77	10	99	5
14. *Patiala State*	42	69	5	4	1	35	5	71	10	91	6
15. *Jind State*	32	53	4	4	1	27	4	65	8	72	5
16. *Nabha State*	39	66	4	4	..	31	4	64	8	88	5
17. Lahore	79	115	28	21	13	81	36	148	49	139	27
18. Amritsar	49	79	9	..	..	50	15	93	17	105	10
19. Gujranwala	46	71	14	15	7	62	19	98	27	82	13
20. Sheikhupura	33	53	5	5	1	30	6	62	12	72	5
II.—Himalayan	47	83	9	9	3	56	11	92	12	104	8
21. *Nahan State*	32	54	5	4	2	24	6	44	8	72	4
22. Simla	207	222	175	66	126	244	244	255	242	227	162
23. *Simla Hill States*	34	62	3	3	1	30	3	63	5	80	4
24. *Bilaspur State*	39	69	3	6	..	34	2	68	4	89	3
25. Kangra	53	97	6	13	3	73	10	117	11	120	6
26. *Mandi State*	47	86	4	..	..	51	6	80	4	117	4
27. *Suket State*	30	53	3	7	..	27	4	42	8	69	3
28. *Chamba State*	26	46	3	3	1	25	3	39	3	59	3
III.—Sub-Himalayan	51	85	11	6	8	70	14	117	20	103	11
29. Ambala	61	95	16	11	10	71	20	114	27	117	16
30. *Kalsia State*	39	65	5	2	1	38	4	74	6	84	6
31. Hoshiarpur	54	93	8	..	..	95	12	144	17	108	8
32. Gurdaspur	42	67	9	1	..	64	14	98	20	81	9
33. Sialkot	39	64	9	8	3	54	13	99	19	76	8
34. Gujrat	41	69	8	8	2	59	10	96	15	85	8
35. Jhelum	54	98	9	6	1	86	14	153	23	122	9
36. Rawalpindi	85	136	22	18	10	92	28	176	35	169	23
37. Attock	37	66	7	5	2	46	8	81	12	89	7
IV.—North-West Dry Area	37	62	7	6	2	41	9	85	13	81	7
38. Montgomery	36	59	7	4	2	33	8	70	15	82	7
39. Shahpur	42	67	12	8	4	51	17	91	23	85	12
40. Mianwali	33	60	2	3	1	35	2	73	5	83	2
41. Lyallpur	37	61	7	6	2	49	9	96	12	76	7
42. Jhang	50	85	9	7	3	53	12	113	19	114	9
43. Multan	44	72	8	8	3	45	10	95	15	95	8
44. *Bahawalpur State*	18	31	2	3	1	17	2	40	3	42	2
45. Muzaffargarh	34	59	5	5	2	36	5	83	8	78	4
46. Dera Ghazi Khan	38	65	5	6	1	41	10	98	10	85	4
Cities	164	220	70	60	37	180	103	274	126	243	64
Selected Towns	189	254	80	49	28	237	112	316	127	278	79
Total Cities and selected Towns	175	234	74	56	33	204	107	291	126	257	70
DELHI	122	180	40	32	21	122	41	190	55	217	42
I.—Indo-Gangetic Plain West	122	180	40	32	21	122	41	190	55	217	42
1. Delhi	122	180	40	32	21	122	41	190	55	217	42
Delhi City	161	228	57	52	32	159	62	235	78	266	59

SUBSIDIARY TABLE III.

Literacy by religion, sex and locality.

District or State and Natural Division.	Number *per mille* who are literate.									
	Hindu.		*Musalman.*		*Christian.*		*Jain.*		*Sikh.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11
PUNJAB	113	11	37	4	140	93	506	47	93	13
INDO-GANGETIC PLAIN WEST	97	9	44	7	119	84	487	39	72	9
1. Hissar	64	3	27	2	236	226	476	35	51	3
2. *Loharu State*	7	1	59	13	..	..	556	..	..	..
3. Rohtak	59	3	50	4	31	14	505	28	147	75
4. *Dujana State*	28	1	75	1	..	..	..	..	..	..
5. Gurgaon	71	3	33	2	266	187	529	46	177	23
6. *Pataudi State*	63	3	72	3	620	..	..	..	..	..
7. Karnal	50	3	36	4	60	51	424	17	72	9
8. Jullundur	133	19	59	10	312	154	593	130	74	7
9. *Kapurthala State*	139	16	38	4	47	52	592	63	70	7
10. Ludhiana	194	24	60	13	415	433	521	39	103	16
11. *Malerkotla State*	109	7	62	5	278	267	452	71	33	1
12. Ferozepore	125	15	32	5	382	161	517	102	65	7
13. *Faridkot State*	131	7	26	2	145	167	671	40	57	4
14. *Patiala State*	98	5	39	4	288	280	484	20	51	6
15. *Jind State*	48	2	43	4	269	266	392	28	87	16
16. *Nabha State*	83	3	32	4	95	167	636	43	56	6
17. Lahore	215	56	74	15	171	126	536	78	89	13
18. Amritsar	144	12	43	4	103	95	461	63	82	11
19. Gujranwala	207	39	33	7	22	15	339	48	136	30
20. Sheikhupura	127	9	28	2	27	31	605	..	80	8
HIMALAYAN	80	5	87	11	771	887	650	114	256	37
21. *Nahan State*	53	4	64	10	650	750	576	250	96	8
22. Simla	154	41	259	87	795	941	881	316	498	216
23. *Simla Hill States*	60	3	66	5	729	468	680	..	120	5
24. *Bilaspur State*	69	3	40	..	1,000	1,000	..	..	223	12
25. Kangra	97	6	64	9	573	515	38	83	293	41
26. *Mandi State*	86	4	70	6	1,000	1,000	..	..	338	19
27. *Suket State*	52	3	59	..	..	..	..	..	417	..
28. *Chamba State*	45	2	52	5	656	417	1,000	..	297	95
SUB-HIMALAYAN	131	15	46	4	180	102	579	80	150	24
29. Ambala	91	9	69	10	703	796	640	117	112	12
30. *Kalsia State*	76	3	36	3	..	..	550	71	84	16
31. Hoshiarpur	106	9	55	5	84	59	561	78	118	10
32. Gurdaspur	108	12	48	7	32	31	..	..	56	8
33. Sialkot	105	12	41	5	76	24	544	59	89	15
34. Gujrat	269	32	34	3	102	98	1,000	1,000	323	41
35. Jhelum	413	62	54	2	596	486	432	22	449	79
36. Rawalpindi	359	77	62	3	757	675	568	58	438	119
37. Attock	403	64	30	1	828	616	1,000	..	413	54
NORTH-WEST DRY AREA	235	24	24	3	79	31	585	91	130	22
38. Montgomery	194	25	22	2	45	30	600	..	118	14
39. Shahpur	269	50	28	2	28	18	1,000	..	279	100
40. Mianwali	273	11	22	..	690	700	..	..	344	23
41. Lyallpur	137	19	31	3	18	7	669	48	85	9
42. Jhang	412	39	24	2	165	65	1,000	333	404	68
43. Multan	279	22	24	3	431	182	462	250	262	38
44. *Bahawalpur State*	105	5	17	1	686	633	..	..	38	3
45. Muzaffargarh	312	17	22	2	779	127	500	..	122	23
46. Dera Ghazi Khan	378	30	25	1	600	438	496	95	188	41
Cities	270	81	142	39	650	513	392	52	326	76
Selected Towns	330	85	146	38	470	455	593	97	386	191
Total Cities and Selected Towns	299	83	144	39	541	484	546	88	351	115
DELHI	150	26	182	31	560	411	699	162	616	247
INDO-GANGETIC PLAIN WEST ..	150	26	182	31	560	411	699	162	616	247
1. Delhi	150	26	182	31	560	411	699	162	616	247
Delhi City	194	36	209	37	753	663	723	194	616	247

NOTE.—The figures in this table are for persons of 5 years of age and over only.

SUBSIDIARY TABLE IV.

English literacy by age, sex and locality.

District or State and Natural Division.	LITERATE IN ENGLISH PER 10,000.															
	1921.								All ages 5 and over							
	5—9 (inclusive).		10—14 (inclusive).		15—19 (inclusive).		20 and over.		1921.		1911.		1901.		1891.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PUNJAB AND DELHI ..	6	5	82	13	258	21	149	16	127	14	92	12	71	7	34	5
PUNJAB	6	4	79	12	249	19	137	14	118	12	..	..	..	..	..	..
INDO-GANGETIC PLAIN WEST (TOTAL)	6	4	88	13	273	24	177	19	147	16	104	13	75	7	30	5
INDO-GANGETIC PLAIN WEST ..	4	2	81	12	254	20	154	14	128	25	..	..	..	..	..	..
1. Hissar ..	2	..	25	1	82	6	56	4	44	3	32	3	31	3	10	2
2. *Loharu State* ..	12	..	14	20	47	..	11	..	14	2	15	..	12	..	2	..
3. Rohtak ..	..	..	39	2	117	2	60	3	53	3	34	1	28	1	6	..
4. *Dujana State* ..	..	..	6	..	35	..	30	..	21	..	39	..	23	..	5	..
5. Gurgaon ..	..	..	39	1	88	3	58	5	48	3	30	3	29	2	9	1
6. *Pataudi State* ..	..	..	..	..	34	..	39	..	26	..	43	1	12	..	38	..
7. Karnal ..	1	..	35	1	108	3	58	3	50	2	33	2	44	2	10	1
8. Jullundur ..	1	1	134	14	468	26	174	13	170	12	96	8	82	5	43	5
9. *Kapurthala State* ..	..	..	76	7	239	8	112	7	103	6	76	3	17	1	13	..
10. Ludhiana ..	..	..	155	8	480	30	161	18	167	10	120	11	61	4	15	1
11. *Malerkotla State* ..	..	..	91	3	234	..	228	6	181	4	58	8	25	3	10	1
12. Ferozepore ..	..	..	74	18	235	31	124	11	107	12	85	8	63	3	43	5
13. *Faridkot State* ..	..	..	5	..	75	4	59	2	43	1	33	..	14	1	10	..
14. *Patiala State* ..	2	1	39	2	116	5	83	5	67	4	52	3	65	3	7	1
15. *Jind State* ..	2	1	53	4	158	7	78	9	70	6	37	7	24	4	3	..
16. *Nabha State* ..	..	..	17	..	46	4	59	1	43	1	17	1	15	..	6	..
17. Lahore ..	34	19	249	64	718	100	545	74	459	66	374	82	219	35	125	26
18. Amritsar ..	..	..	53	13	271	13	186	13	148	11	116	12	74	9	23	4
19. Gujranwala ..	6	6	153	19	327	27	133	12	136	14	73	2	66	3	17	2
20. Sheikhupura ..	2	..	28	1	55	6	69	4	50	3	..	..	..	..	..	..
HIMALAYAN ..	11	19	66	35	160	32	96	25	85	26	58	24	48	16	31	11
21. *Nahan State* ..	2	2	36	2	95	3	62	5	54	4	42	5	29	3	15	1
22. Simla	603	1,137	1,139	1,809	1,110	1,616	1,177	1,190	1,129	1,310	1,160	1,221	859	775	656	410
23. *Simla Hill States* ..	3	1	37	2	126	4	69	3	62	2	} 23	3	14	1	5	1
24. *Bilaspur State* ..	..	..	11	..	95	..	15	..	20	..	}					
25. Kangra ..	1	..	44	1	123	2	48	2	48	2	30	2	31	2	11	3
26. *Mandi State* ..	..	..	44	2	126	..	47	2	48	2	8	..	} 4	..	{ 3	..
27. *Suket State* ..	..	..	6	..	11	..	17	1	13	..	9	1	}		{ 2	..
28. *Chamba State* ..	..	..	31	..	87	..	43	5	42	3	17	2	16	1	10	2
SUB-HIMALAYAN ..	10	8	113	16	371	22	173	17	155	16	115	13	90	9	49	6
29. Ambala ..	27	21	178	41	400	46	242	38	218	36	205	31	123	17	101	11
30. *Kalsia State* ..	2	..	11	..	74	..	57	..	45	..	36	..	26	1	5	..
31. Hoshiarpur ..	..	..	127	1	446	2	85	2	110	2	54	2	41	1	6	..
32. Gurdaspur ..	7	4	82	14	305	27	118	10	112	11	63	7	46	4	14	2
33. Sialkot ..	7	3	97	9	348	17	157	14	138	12	104	4	72	6	35	5
34. Gujrat ..	4	1	82	3	248	7	92	4	89	4	59	3	49	2	11	1
35. Jhelum ..	2	1	117	..	359	12	136	6	122	5	76	6	72	3	13	2
36. Rawalpindi ..	46	43	203	83	731	80	512	78	420	73	367	59	227	27	151	20
37. Attock ..	2	1	55	3	152	5	104	5	81	4	57	4	..	..	..	..
NORTH-WEST DRY AREA ..	2	1	45	4	144	7	86	5	70	4	54	4	46	3	18	3
38. Montgomery ..	1	1	33	5	88	6	92	4	66	4	45	3	37	1	8	1
39. Shahpur ..	1	1	59	1	179	7	85	4	76	3	69	4	73	2	14	1
40. Mianwali ..	2	2	33	2	155	10	126	6	92	5	49	2	26	1	..	..
41. Lyallpur ..	1	..	79	3	228	9	122	5	104	4	55	4	35	3	..	..
42. Jhang ..	2	..	67	2	191	2	72	2	69	1	26	1	49	1	6	..
43. Multan ..	10	6	42	11	138	17	109	14	85	12	120	15	112	12	65	11
44. *Bahawalpur State* ..	4	1	11	3	62	3	45	4	34	3	29	3	10	1	3	..
45. Muzaffargarh ..	..	..	20	1	79	2	62	1	46	1	34	..	20	1	8	1
[illegible] Dera Ghazi Khan ..	..	..	41	..	138	1	51	1	47	1	25	2	39	2	10	2
[illegible]	68	62	275	62	678	99	698	121	560	102	..	..	..	..	..	..
[illegible]tic Plain West ..	68	62	275	62	678	99	693	121	566	102	..	..	..	..	..	..
[illegible]	68	62	275	62	678	99	693	121	566	102	..	..	..	..	..	..

SUBSIDIARY TABLE V.

Progress of education since 1881.

District or State and Natural Division.	Number of literate *per mille.*																					
	All ages.										10—14 (*inclusive.*)				15—19 (*inclusive*)				20 *and over.*			
	Males.					Females.					Males.		Females.		Males.		Females.		Males.		Females.	
	1921	1911	1901	1891	1881	1921	1911	1901	1891	1881	1921	1911	1921	1911	1921	1911	1921	1911	1921	1911	1921	1911
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PUNJAB AND DELHI ..	**66**	**63**	**65**	**61**	**47**	**8**	**6**	**3**	**2**	**1**	**54**	**42**	**12**	**9**	**98**	**78**	**17**	**12**	**97**	**95**	**10**	**7**
PUNJAB ..	**64**	..	..	..	..	**8**	..	..	..	..	**53**	..	**12**	..	**96**	..	**17**	..	**94**	..	**9**	..
Indo-Gangetic Plain West (Total).	**68**	**63**	**61**	**59**	**47**	**9**	**7**	**3**	**2**	**1**	**54**	**41**	**13**	**10**	**97**	**76**	**19**	**14**	**100**	**94**	**11**	**7**
Indo-Gangetic Plain West	**64**	..	..	..	..	**8**	..	..	..	..	**51**	..	**12**	..	**92**	..	**17**	..	**94**	..	**9**	..
1. Hissar ..	49	46	50	44	41	3	2	1	1	..	33	28	3	2	76	52	6	3	77	70	3	2
2. *Loharu State* ..	12	26	38	21	30	2	1	2	1	1	14	6	6	2	18	31	4	1	15	41	2	1
3. Rohtak ..	53	49	50	51	47	3	2	1	1	..	48	35	3	3	78	63	5	3	79	72	4	2
4. *Dujana State* ..	32	41	45	35	47	1	1	1	1	..	13	30	..	1	51	73	2	1	53	59	1	2
5. Gurgaon ..	54	42	49	48	42	3	2	1	1	..	45	29	4	3	69	53	7	4	80	63	4	2
6. *Pataudi State* ..	60	53	64	68	57	3	2	1	..	1	45	29	2	1	55	44	9	3	94	86	3	3
7. Karnal ..	42	41	43	48	39	3	2	1	1	..	25	20	4	2	55	43	6	2	65	63	4	2
8. Jullundur ..	76	63	64	63	51	11	6	3	2	1	87	46	20	8	137	88	28	13	101	92	12	6
9. *Kapurthala State* ..	59	66	55	54	39	6	5	3	2	1	56	46	9	6	87	83	12	10	83	98	8	7
10. Ludhiana ..	99	85	83	67	48	16	9	4	2	1	116	65	34	13	160	108	38	18	134	122	17	11
11. *Malerkotla State* ..	67	79	69	52	36	4	6	2	1	..	53	37	7	6	77	92	6	12	95	113	6	8
12. Ferozepore ..	61	60	67	63	42	7	5	3	2	1	48	37	13	9	92	65	19	10	93	94	9	6
13. *Faridkot State* ..	60	67	58	51	34	4	1	2	1	1	25	28	3	1	77	70	10	2	99	110	5	1
14. *Patiala State* ..	61	62	42	56	52	5	4	1	1	..	35	27	5	3	71	62	10	6	94	97	6	5
15. *Jind State* ..	46	44	50	46	39	4	2	2	1	..	27	18	4	2	65	44	8	5	72	69	5	3
16. *Nabha State* ..	58	49	74	68	54	4	3	1	1	..	31	20	4	2	64	49	8	4	88	77	5	4
17. Lahore ..	100	95	74	69	54	23	25	7	5	2	81	69	36	50	148	127	49	72	139	135	27	23
18. Amritsar ..	69	72	74	64	51	8	8	5	3	1	50	50	15	12	93	94	17	15	105	107	10	10
19. Gujranwala ..	62	52	62	59	51	12	5	4	1	1	62	44	19	9	98	79	27	13	82	76	13	6
20. Sheikhupura ..	46	..	..	..	..	4	..	..	..	..	30	..	6	..	62	..	12	..	72	..	5	..
Himalayan ..	**74**	**61**	**67**	**63**	**48**	**7**	**5**	**4**	**3**	**1**	**56**	**36**	**11**	**6**	**92**	**62**	**12**	**8**	**104**	**88**	**8**	**5**
21. *Nahan State* ..	49	47	61	63	40	4	4	3	2	1	24	21	6	4	44	33	8	5	72	71	4	5
22. Simla ..	211	236	222	191	166	156	131	85	48	31	244	272	244	177	255	245	242	215	227	262	162	123
23. *Simla Hill States* ..	56	48	41	47	38	3	3	3	3	2	30	23	3	2	63	5	5	4	80	70	4	3
24. *Bilaspur State* ..	62	32	21	46	44	3	1	..	2	..	34	19	3	1	68	34	4	1	89	5	3	1
25. Kangra ..	85	74	84	70	55	6	3	3	1	1	73	44	10	4	117	78	11	5	120	110	6	4
26. *Mandi State* ..	76	32	47	62	34	3	2	1	1	..	51	12	6	2	80	30	4	2	117	50	4	2
27. *Suket State* ..	48	43	40	24	48	3	1	..	1	2	27	13	4	1	42	38	8	2	69	63	3	1
28. *Chamba State*	41	34	38	43	30	3	1	2	1	1	25	14	3	1	39	27	3	3	59	52	3	2
Sub-Himalayan ..	**73**	**65**	**68**	**60**	**43**	**9**	**7**	**4**	**2**	**1**	**70**	**48**	**14**	**10**	**117**	**87**	**20**	**13**	**103**	**97**	**11**	**8**
29. Ambala ..	85	81	75	65	46	14	7	4	2	1	71	39	20	7	114	82	27	10	117	118	16	9
30. *Kalsia State* ..	58	50	68	62	41	4	3	3	1	..	38	22	4	2	74	41	6	4	84	78	6	5
31. Hoshiarpur ..	82	69	73	65	52	7	5	2	1	..	95	55	12	7	144	95	17	10	108	97	8	6
32. Gurdaspur ..	58	50	51	47	39	8	4	2	1	1	64	42	14	6	98	63	20	8	81	74	9	5
33. Sialkot ..	55	53	52	52	37	8	5	3	2	1	54	39	13	10	99	75	19	11	76	82	8	5
34. Gujrat ..	60	54	61	48	32	7	4	3	2	..	59	49	10	7	96	85	15	9	85	79	8	5
35. Jhelum ..	85	79	82	59	40	8	6	4	2	1	86	57	14	11	153	116	23	14	122	115	9	7
36. Rawalpindi ..	120	101	92	81	55	19	20	9	4	2	92	76	28	32	176	137	35	35	169	144	23	23
37. Attock ..	57	54	..	..	..	6	5	..	..	..	46	39	8	9	81	77	12	11	89	85	7	6
North-West Dry Area ..	**53**	**60**	**69**	**69**	**54**	**6**	**4**	**3**	**1**	**1**	**41**	**28**	**9**	**6**	**85**	**82**	**13**	**8**	**81**	**95**	**7**	**5**
38. Montgomery ..	51	57	69	62	49	6	5	4	1	..	33	36	8	8	70	65	15	10	82	94	7	5
39. Shahpur ..	58	66	72	66	48	10	8	7	2	1	51	48	17	14	91	92	23	20	85	100	12	10
40. Mianwali ..	52	60	67	..	..	2	2	3	..	..	35	42	2	5	73	107	5	5	83	95	2	3
41. Lyallpur ..	52	52	45	..	..	6	4	1	..	..	49	35	9	5	96	66	12	8	76	84	7	5
42. Jhang ..	73	71	97	77	67	8	4	5	2	1	53	38	12	5	113	97	19	10	114	114	9	5
43. Multan ..	63	86	101	84	70	7	5	4	2	1	45	50	10	6	95	113	15	9	95	137	8	6
44. *Bahawalpur State* ..	27	37	51	57	40	2	2	..	1	..	17	20	2	2	40	42	3	3	42	57	2	2
45. Muzaffargarh ..	52	67	65	68	57	4	2	2	1	1	36	43	5	3	83	97	8	5	78	105	4	2
46. Dera Ghazi Khan ..	57	48	67	70	46	4	1	2	1	..	41	32	10	3	98	76	10	3	85	75	4	1
DELHI ..	**161**	..	..	..	..	**34**	..	..	..	..	**122**	..	**41**	..	**190**	..	**55**	..	**217**	..	**42**	..
Indo-Gangetic Plain West	**161**	..	..	..	..	**34**	..	..	..	..	**122**	..	**41**	..	**190**	..	**55**	..	**217**	..	**42**	..
1. Delhi ..	161	..	..	..	..	34	..	..	..	..	122	..	41	..	190	..	55	..	217	..	42	..

Note.—Figures of Sheikhupura for 1881, 1891, 1901 and 1911, of Attock for 1881, 1891 and 1901 and of Mianwali and Lyallpur for 1881 and 1891 are not available.

SUBSIDIARY TABLE VI.

Literacy by Caste.—Punjab.

Caste.	Number per 1,000 who are Literate.						Number per 10,000 Literate in English.					
	1921.			1911.			1921.			1911.		
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Aggarwal	209	371	16	212	381	13	144	258	7	117	209	9
2. Ahir	12	21	1	8	14	..	14	25	1	6	10	..
3. Arain	17	28	3	11	19	1	29	52	1	15	27	1
4. Arora	172	294	29	210	367	28	142	255	10	123	225	3
5. Awan..	20	36	1	13	25	1	23	43	..	10	18	..
6. Barwala	11	20	1	7	12	1	7	12	..	1	2	..
7. Bawaria	2	3	..	4	6	..	1	1	..	1	1	..
8. Bharai	6	10	..	4	7	..	4	7	..	1	1	..
9. Biloch	9	16	1	8	13	1	6	12	..	5	9	..
10. Brahman	122	208	17	113	195	12	174	312	7	114	198	10
11. Chamar	5	9	..	4	7	..	1	2	..	..	1	..
12. Chhimba	33	57	4	28	48	3	19	34	..	8	14	..
13. Churah	2	4	..	1	2	..	2	4	..	1	1	..
14. Dagi and Koli	5	9	..	3	5	..	3	5	..	1	2	..
15. Dhanak	2	3	..	..	1	..	..	..	..	..	..	..
16. Dhobi	11	19	2	9	17	1	6	10	..	4	7	..
17. Dogar	6	11	1	5	9	..	6	11	1	3	5	..
18. Dumna	5	9	..	2	3	..	1	2	..	1	1	..
19. Faqir ..	21	37	2	36	60	2	6	11	1	6	10	..
20. Ghirath	16	30	..	11	21	..	5	9	..	6	12	..
21. Gujjar	11	19	1	7	12	..	10	17	..	4	7	..
22. Harni	3	6	..	3	5	..	..	..	..	..	..	..
23. Jat	19	31	3	17	28	2	20	34	1	10	20	..
24. Jhiwar	12	21	2	11	19	1	12	22	..	6	12	..
25. Jogi (Rawal)	43	77	6	24	46	1	32	62	..	13	27	..
26. Julaha ..	11	20	1	8	14	..	6	10	..	4	7	..
27. Kamboh	15	26	2	16	27	2	15	27	1	12	21	2
28. Kanet	19	36	1	17	32	1	13	24	..	5	10	..
29. Kashmiri	39	64	11	34	57	7	92	167	7	77	141	3
30. Khatri	231	373	60	250	405	60	559	976	37	446	801	10
31. Khoja ..	57	103	10	58	107	3	62	118	5	47	86	3
32. Khokhar	28	46	6	16	28	1	46	82	3	22	40	..
33. Kumhar	5	9	1	4	7	..	4	7	..	2	5	..
34. Labana	30	52	5	23	41	1	15	29	..	6	11	..
35. Lohar	17	29	2	14	25	1	20	36	1	9	17	..
36. Machhi	4	7	1	3	5	..	3	5	..	2	3	..
37. Mahtam	4	7	..	9	17	..	1	1	..	1	2	..
38. Mali ..	6	11	..	5	9	1	6	12	..	7	12	..
39. Maliar ..	6	11	1	5	9	..	3	6	..	2	3	..
40. Mallah	5	8	..	3	6	..	4	6	..	2	3	..
41 Meo ..	6	12	..	5	10	..	2	4	..	2	4	..
42. Mirasi	16	28	1	11	20	..	9	17	1	3	6	..
43. Mochi	6	9	1	4	7	..	2	4	..	2	3	..
44. Moghal	53	88	13	49	82	8	104	189	9	88	160	2
45. Mussalli	1	2	..	1	1	..	1	1	..	..	..	..
46. Nai ..	16	27	2	13	23	1	13	24	1	6	12	..
47. Pakhiwara	17	31	1	3	4	1	..	..	..	..	..	..
48. Pathan	57	94	13	53	86	8	119	212	7	89	154	3
49. Qassab	11	20	2	7	14	1	11	21	..	4	8	..
50. Qureshi	92	153	22	77	136	10	150	273	11	98	183	2
Rajput	33	57	5	26	45	3	46	80	5	20	52	1
Saini ..	35	61	4	26	45	2	45	82	1	19	34	..
…nsi ..	32	50	8	2	4	..	118	178	35	1	2	..
[illegible]	97	161	23	83	145	12	164	297	4	118	219	3
[illegible]	87	136	25	74	124	13	222	385	12	152	272	4
[illegible]	82	140	15	80	141	7	38	68	2	2	41	..
[illegible]	23	38	5	23	39	3	17	30	1	13	23	..
[illegible]	7	13	1	6	10	1	5	9	..	4	7	..

SUBSIDIARY TABLE VI.

Literacy by Caste.—Delhi.

Caste.	Number per 1,000.						Number per 10,000 literate in English.		
	Literate.			*Illiterate.*					
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1	2	3	4	5	6	7	8	9	10
1. Aggarwal	343	541	74	657	459	926	599	1,009	41
2. Ahir	25	41	3	975	959	997	39	66	2
3. Arain	37	66	2	963	934	998	64	115	..
4. Brahman	235	349	63	765	651	937	658	1,073	34
5. Chamar	4	7	..	996	993	1,000	1	2	1
6. Chuhra	5	8	..	995	992	1,000	3	5	..
7. Dagi and Koli	13	21	1	987	979	999	10	16	..
8. Dhanak	3	4	..	997	996	1,000	..	..	..
9. Dhobi	5	8	1	995	992	999	3	5	..
10. Faqir	9	18	..	991	982	1,000	4	7	..
11. Gujjar	13	23	..	987	977	1,000	14	25	..
12. Jat	35	59	1	965	941	999	62	111	1
13. Jhiwar	27	41	2	973	959	998	15	24	..
14. Julaha	7	12	..	993	988	1,000	3	6	..
15. Khatri	381	590	98	619	410	902	1,689	2,812	149
16. Kumhar	7	12	1	993	988	999	1	2	..
17. Lohar	35	56	3	965	944	997	43	72	..
18. Machhi	16	18	12	984	982	988	19	14	29
19. Mali	27	46	2	973	954	998	19	33	..
20. Meo	25	43	1	975	957	999	33	53	6
21. Moghal	203	295	87	797	705	913	579	1,010	40
22. Nai	30	51	6	970	949	994	32	59	..
23. Pathan	118	182	19	882	818	981	256	422	1
24. Qureshi	111	185	25	889	815	975	306	494	83
25. Rajput	107	152	30	893	848	970	243	365	35
26. Saini	14	25	1	986	975	999	18	34	..
27. Sansi	..	..	..	1,000	1,000	1,000	..	..	..
28. Sayad	261	379	94	739	621	906	704	1,191	4
29. Sheikh	99	158	21	901	842	979	145	218	5
30. Sunar	139	230	25	861	770	975	39	69	..
31. Tarkhan	69	107	5	931	893	995	65	103	..
32. Teli	12	22	..	988	978	1,000	13	23	..

SUBSIDIARY TABLE VII.

Showing the growth in the number of educational institutions, scholars and expenditure from 1889-90 to 1920-21 from the returns of the Education Department, Punjab.

Class of Institution.		1889—1890. Institutions. Males.	1889—1890. Institutions. Females.	1889—1890. Scholars. Males.	1889—1890. Scholars. Females.	1890—1891. Institutions. Males.	1890—1891. Institutions. Females.	1890—1891. Scholars. Males.	1890—1891. Scholars. Females.	1891—1892. Institutions. Males.	1891—1892. Institutions. Females.	1891—1892. Scholars. Males.	1891—1892. Scholars. Females.
Collegiate Education.	Arts Colleges ..	7	..	439	..	7	..	468	..	7	..	534	..
	Professional Colleges ..	1	..	102	4	1	..	124	..	1	..	144	..
School Education, General	Secondary Schools	250	24	44,512	1,437	257	26	44,778	1,646	259	28	48,709	1,878
	Primary Schools ..	1,677	299	84,738	8,555	1,726	299	83,249	9,012	1,733	313	88,972	10,106
School Education, Special.	Training Schools ..	5	..	316	..	5	..	342	..	6	..	357	..
	All Others ..	8	..	783	15	7	..	782	..	7	..	937	..
Private Institutions.	Advanced ..	944	..	12,595	..	794	..	9,408	..	688	..	9,320	..
	Elementary ..	6,453	806	93,986	9,693	5,520	998	83,905	11,999	5,755	611	91,092	8,178
Total ..		9,345	1,129	237,471	19,704	8,817	1,323	223,056	22,657	8,456	952	240,065	20,162
Expenditure on education ..		Rs. 24,32,855				Rs. 25,33,609				Rs. 26,70,499			

Class of Institution.		1892—1893. Institutions. Males.	1892—1893. Institutions. Females.	1892—1893. Scholars. Males.	1892—1893. Scholars. Females.	1893—1894. Institutions. Males.	1893—1894. Institutions. Females.	1893—1894. Scholars. Males.	1893—1894. Scholars. Females.	1894—1895. Institutions. Males.	1894—1895. Institutions. Females.	1894—1895. Scholars. Males.	1894—1895. Scholars. Females.
Collegiate Education.	Arts Colleges ..	8	..	661	..	9	..	870	..	9	..	1,003	..
	Professional Colleges ..	1	..	158	..	1	..	189	..	1	..	211	..
School Education, General.	Secondary Schools	271	27	48,812	1,898	283	28	51,328	2,048	290	29	52,632	2,161
	Primary Schools	1,762	325	83,381	10,414	1,787	322	85,611	10,774	2,446	333	108,426	10,980
School Education, Special.	Training Schools	6	..	321	..	6	..	278	..	6	..	342	..
	All Others ..	8	..	1,050	..	7	..	1,100	..	8	..	1,366	..
Private Institutions.	Advanced ..	660	..	7,677	..	585	..	7,957	..	493	..	6,745	..
	Elementary ..	5,151	1,025	84,210	12,517	5,275	1,023	87,188	14,082	4,109	918	62,660	12,235
Total ..		7,867	1,377	226,270	24,829	7,953	1,373	234,521	26,904	7,362	1,280	233,385	25,376
Expenditure on education ..		Rs. 28,07,053				Rs. 28,81,125				Rs. 27,70,430			

Class of Institution.		1895—1896. Institutions. Males.	1895—1896. Institutions. Females.	1895—1896. Scholars. Males.	1895—1896. Scholars. Females.	1896—1897. Institutions. Males.	1896—1897. Institutions. Females.	1896—1897. Scholars. Males.	1896—1897. Scholars. Females.	1897—1898. Institutions. Males.	1897—1898. Institutions. Females.	1897—1898. Scholars. Males.	1897—1898. Scholars. Females.
Collegiate Education.	Arts Colleges ..	9	..	1,070	..	9	..	1,171	..	10	..	1,157	..
	Professional Colleges ..	1	..	220	8	1	..	231	7	1	..	200	7
School Education, General.	Secondary Schools	296	31	55,976	2,422	315	31	58,600	2,528	330	32	60,764	2,632
	Primary Schools	2,468	328	109,862	11,055	2,453	317	108,333	10,713	2,423	319	106,793	11,205
School Education, Special.	Training Schools	6	..	344	..	6	..	352	..	6	..	326	..
	All Others ..	9	1	1,356	42	10	2	1,562	241	10	3	1,654	252
Private Institutions.	Advanced ..	488	..	7,125	..	504	..	7,264	..	445	..	6,612	..
	Elementary ..	4,381	645	66,771	9,364	4,340	519	67,167	7,753	4,109	506	63,016	7,933
Total ..		7,658	1,005	242,724	22,891	7,638	869	244,680	21,242	7,334	860	240,522	22,029
Expenditure on education ..		Rs. 30,27,066				Rs. 30,72,714				Rs. 31,56,514			

Class of Institution.		1898—1899. Institutions. Males.	1898—1899. Institutions. Females.	1898—1899. Scholars. Males.	1898—1899. Scholars. Females.	1899—1900. Institutions. Males.	1899—1900. Institutions. Females.	1899—1900. Scholars. Males.	1899—1900. Scholars. Females.	1900—1901. Institutions. Males.	1900—1901. Institutions. Females.	1900—1901. Scholars. Males.	1900—1901. Scholars. Females.
Collegiate Education.	Arts Colleges ..	10	..	1,250	..	11	..	1,272	..	13	..	1,251	..
	Professional Colleges ..	1	..	200	8	1	..	175	13	1	..	167	11
School Education, General.	Secondary Schools	339	33	61,697	2,550	348	35	64,541	2,665	372	34	65,392	2,675
	Primary Schools	2,350	321	102,458	11,070	2,339	308	104,349	11,271	2,367	315	105,352	12,068
School Education, Special.	Training Schools	6	..	322	..	6	..	344	..	6	..	322	..
	All Others ..	10	3	1,718	173	13	3	1,910	189	13	2	2,013	154
Private Institutions.	Advanced ..	449	..	6,687	..	418	..	6,192	6	378	..	6,541	..
	Elementary ..	4,111	515	64,335	8,629	3,905	480	60,811	8,551	3,505	473	54,456	8,762
Total ..		7,276	872	238,667	22,430	7,041	826	239,624	22,695	6,655	824	235,494	23,670
Expenditure on education ..		Rs. 32,20,666				Rs. 33,23,282				Rs. 33,02,046			

SUBSIDIARY TABLE VII.

Showing the growth in the number of educational institutions, scholars and expenditure from 1889-90 to 1920-21 from the returns of the Education Department, Punjab—*continued*.

Class of Institution.		1901—1902.				1902—1903.				1903—1904.			
		Institutions.		Scholars.		Institutions.		Scholars.		Institutions.		Scholars.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Collegiate Education.	Arts Colleges ..	13	..	1,331	..	15	..	1,312	..	15	..	1,360	..
	Professional Colleges ..	3	..	404	12	3	..	455	..	3	..	486	..
School Education, General.	Secondary Schools	351	34	62,679	2,795	351	32	64,887	2,678	344	35	64,698	2,811
	Primary Schools	2,257	326	100,663	12,334	2,452	353	108,177	13,654	2,462	360	109,343	13,705
School Education, Special.	Training Schools	5	..	261	..	5	..	255	..	5	..	248	..
	All Others ..	11	3	1,692	132	15	4	1,841	269	16	6	2,012	244
Private Institutions.	Advanced ..	251	..	4,645	39	342	..	5,305	..	354	..	5,351	43
	Elementary ..	3,050	549	49,917	11,219	3,809	674	60,237	10,468	3,631	716	58,356	12,565
	Total ..	5,941	912	221,592	26,531	6,992	1,063	242,470	27,069	3,631	1,117	241,854	29,376
Expenditure on education ..		Rs. 32,53,827				Rs. 37,63,988				Rs. 41,16,698			

Class of Institution.		1904—1905.				1905—1906.				1906—1907.			
		Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.
Collegiate Education.	Arts Colleges ..	15	..	1,378	..	10	..	1,396	..	10	..	1,598	..
	Professional Colleges ..	3	1	605	24	3	1	524	34	3	2	629	39
School Education, General.	Secondary Schools	338	36	64,785	3,003	288	36	59,506	2,956	290	39	64,359	3,056
	Primary Schools	2,514	364	112,410	13,814	2,930	459	127,057	16,770	3,151	542	141,345	20,201
School Education, Special.	Training Schools	5	1	363	40	5	1	422	53	5	1	401	2,521
	All Others ..	17	8	2,179	438	17	12	2,179	567	18	13	72	674
Private Institution.	Advanced ..	306	1	4,950	124	226	..	3,907	36	248	3	4,006	168
	Elementary ..	3,682	635	59,086	11,764	2,845	565	47,633	11,707	2,772	688	48,095	13,073
	Total ..	6,880	1,046	245,756	29,207	6,324	1,074	242,624	32,123	6,497	1,288	262,954	37,283
Expenditure on education ..		Rs. 43,37,615				Rs. 49,65,576				Rs. 51,96,890			

Class of Institution.		1907—1908.				1908—1909.				1909—1910.			
		Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.
Collegiate Education.	Arts Colleges ..	10	..	1,725	..	10	..	1,860	..	10	..	2,022	..
	Professional Colleges ..	3	2	572	34	4	2	578	53	5	2	590	44
School Education, General.	Secondary Schools	291	40	67,220	3,333	296	44	71,683	3,806	304	42	81,926	4,006
	Primary Schools	3,343	586	146,290	21,615	3,408	600	149,542	22,672	3,345	602	157,946	26,309
School Education, Special.	Training Schools	5	1	365	37	5	1	371	25	5	1	390	16
	All Others	21	11	2,420	660	23	11	2,468	726	25	10	2,848	620
Private Institutions.	Advanced	208	..	4,215	..	168	1	3,710	85	183	2	3,259	127
	Elementary ..	2,510	595	43,958	10,419	2,022	508	35,413	9,584	2,054	643	36,499	12,864
	Total ..	6,891	1,235	266,765	36,098	5,936	1,167	265,625	36,951	5,931	1,802	285,480	43,986
Expenditure on education ..		Rs. 56,36,126				Rs. 55,59,278				Rs. 58,43,382.			

Class of Institution.		1910—1911.				1911—1912.				1912—1913.			
		Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.	Institutions. Males.	Institutions. Females.	Scholars. Males.	Scholars. Females.
Collegiate Education.	Arts Colleges ..	11	..	2,270	..	11	..	2,659	..	9	..	2,770	3
	Professional Colleges ..	5	2	667	42	6	2	860	30	6	1	840	35
School Education, General.	Secondary Schools	307	50	87,277	5,168	312	52	93,326	6,092	317	56	93,885	7,190
	Primary Schools	3,321	599	164,081	26,174	3,417	637	179,410	29,269	3,689	709	197,230	32,118
School Education, Special.	Training Schools	6	6	382	55	7	6	452	48	20	8	672	84
	All Others ..	24	12	2,755	747	24	19	2,785	1,236	25	5	2,617	408
Private Institution.	Advanced ..	166	..	3,817	97	176	..	4,486	59	186	1	3,877	90
	Elementary ..	2,053	716	38,386	15,022	1,867	875	43,226	53,909	2,384	908	50,498	18,174
	Total ..	5,893	1,885	299,635	47,305	5,820	1,591	327,204	53,909	6,636	1,688	352,889	58,102
Expenditure on education ..		Rs. 60,57,056				Rs. 68,64,909				Rs. 84,20,780.			

SUBSIDIARY TABLE VII.

Showing the growth in the number of educational institutions, scholars and expenditure from 1889-90 to 1920-21 from the returns of the Education Department, Punjab—*concluded.*

Class of Institution.		1913—1914. Institutions. Males.	1913—1914. Institutions. Females.	1913—1914. Scholars. Males.	1913—1914. Scholars. Females.	1914—1915. Institutions. Males.	1914—1915. Institutions. Females.	1914—1915. Scholars. Males.	1914—1915. Scholars. Females.	1915—1916. Institutions. Males.	1915—1916. Institutions. Females.	1915—1916. Scholars. Males.	1915—1916. Scholars. Females.
Collegiate Education.	Arts Colleges ..	9	1	3,163	13	9	1	3,490	18	9	1	3,873	20
	Professional Colleges ..	6	1	792	37	6	1	833	30	6	1	921	39
School Education, General.	Secondary Schools	352	59	98,680	7,744	387	63	102,713	8,338	413	71	107,390	10,272
	Primary Schools	4,158	793	219,796	37,199	4,552	878	227,890	38,757	4,757	922	234,192	41,161
School Education, Special.	Training Schools	23	7	795	111	24	9	861	176	24	10	960	229
	Primary Schools	31	5	2,956	527	36	5	3,124	507	37	5	3,339	557
Private Institutions.	Advanced ..	226	..	3,961	38	182	..	3,101	..	192	1	3,228	28
	Primary ..	2,263	1,003	45,626	18,518	1,992	969	39,073	16,083	2,067	862	40,402	15,546
	Total ..	7,068	1,869	375,769	65,187	7,188	1,926	381,094	64,815	7,505	1,873	394,805	68,852
Expenditure on education ..		Rs. 93,21,575				Rs. 1,07,18,807				Rs. 1,12,16,765			

Class of Institution.		1916—1917. Institutions. Males.	1916—1917. Institutions. Females.	1916—1917. Scholars. Males.	1916—1917. Scholars. Females.	1917—1918. Institutions. Males.	1917—1918. Institutions. Females.	1917—1918. Scholars. Males.	1917—1918. Scholars. Females.	1918—1919. Institutions. Males.	1918—1919. Institutions. Females.	1918—1919. Scholars. Males.	1918—1919. Scholars. Females.
Collegiate Education.	Arts Colleges ..	10	1	4,214	22	11	1	4,593	28	12	1	4,540	30
	Professional Colleges ..	6	1	1,115	39	6	1	1,332	38	6	1	1,461	29
School Education, General.	Secondary Schools	422	75	111,541	10,970	434	80	112,050	11,286	462	89	116,460	13,745
	Primary Schools	4,918	935	244,796	43,055	5,084	954	242,335	43,254	5,172	951	246,771	42,919
School Education, Special.	Training Schools	16	13	912	224	13	14	804	290	18	11	911	295
	All Others ..	40	5	3,564	591	38	6	3,402	632	39	5	3,854	613
Private Institutions.	Advanced ..	175	..	3,313	67	167	1	2,740	65	149	2	2,444	23
	Elementary ..	1,868	872	37,581	14,734	1,671	760	33,743	12,247	1,380	667	31,502	11,603
	Total ..	7,455	1,902	407,036	69,702	7,424	1,817	400,999	67,840	7,238	1,727	407,948	69,257
Expenditure on education ..		Rs. 1,08,63,320				Rs. 1,14,72,852				Rs. 1,24,02,186			

Class of Institution.		1919—1920. Institutions. Males.	1919—1920. Institutions. Females.	1919—1920. Scholars. Males.	1919—1920. Scholars. Females.	1920—1921. Institutions. Males.	1920—1921. Institutions. Females.	1920—1921. Scholars. Males.	1920—1921. Scholars. Females.
Collegiate Education.	Arts Colleges ..	12	1	4,566	38	16	1	4,266	33
	Professional Colleges ..	8	1	1,501	27	9	1	1,676	35
School Education, General.	Secondary Schools	835	93	164,870	13,761	976	99	189,655	13,936
	Primary Schools	5,162	1,001	228,404	45,855	5,369	1,017	238,674	47,212
School Education, Special.	Training Schools	15	12	1,062	300	18	12	1,305	359
	All Others. ..	36	6	3,197	691	35	6	3,017	669
Private Institutions.	Advanced. ..	140	8	2,596	185	147	2	2,901	188
	Elementary ..	1,615	716	39,221	11,715	1,551	680	40,363	12,700
	Total ..	7,823	1,838	445,417	72,572	8,121	1,818	481,857	75,132
Expenditure on education ..		Rs. 1,41,93,952				Rs. 1,84,06,424			

Expenditu

CHAPTER IX.

Language.

158. Reference to Statistics. 159. Accuracy of the returns. 160. General Distribution of languages. 161. Assam-Burmese group. 162. Tibeto-Himalayan Branch (Tibetan group). 163. Pronominalised Himalayan group (Western sub-group). 164. The Dravadian family. 165. Eranian branch. 166. Non-Sanskritic sub-branch. (Kashmiri). 167. Lahnda. 168. Sindhi. 169. Marahti 170. Eastern group 171. Western Hindi. 172. Hindostani. 173. Urdu. 174. Other Hindi. 175. Rajasthani. 176. Gujrati. 177. Punjabi. 178. Standard Punjabi. 179. Dogri. 180. Western Pahari. 181. Simla group. 182. Kulu group. 183. Mandi group. 184. Chamba group. 185. Central Pahari (Garhwali). 186. Eastern Pahari (Naipali). 187. Gypsy Dialects 188. Asiatic Languages. 189. Non-Asiatic Languages. 190. Remarks about Linguistic boundaries. 191. The influence of Education on local dialects. 192. Literary activity in different languages.

Reference to Statistics.

158. The statistics of language are given in Imperial Table X, where they are grouped under three main headings, *viz.*, the Vernaculars of India, Vernaculars of other Asiatic Countries, and European Languages. In this chapter the figures will be discussed according to the scheme of classification drawn up by Sir G. A. Grierson, and prescribed by the Census Commissioner. At the end of this chapter will be found the subsidiary tables showing—

(*I*) the distribution of the total population by languages,

(*II*) the distribution of important languages of the provinces by natural divisions, districts and States, and

(*III*) the number of books published annually in each language.

Accuracy of the returns

159. The instructions issued at this census with respect to the entry of language, were the same as in 1911. The enumerators were required to enter the language ordinarily used by each person in his home. The rule was fully explained to the enumerators, with the result that registration of dialects in place of main languages was generally avoided. The few entries relating to dialects made in the enumeration books inspite of the precautions taken, were classified in the compilation office on the method detailed on the title page to Table X. The statistics must be taken as fairly accurate, as no vitiating tendency was noticed at the time of preliminary or final enumeration. Only in the case of aboriginal tribes, whose special languages were described by their caste names in 1911, the figures appear to be somewhat unreliable. 2,521 persons have recorded their language by caste names as against 12,136 in 1911. Table XIII (caste) shows that members of aboriginal tribes such as Bawaria, Sansi, Od, etc., are still found in large numbers in many districts of the Punjab, and there is no reason to believe that they have lost or abandoned their special languages. The only reason seems to be that the enumerators have not been able to discriminate between them and Punjabi (the difference in vocabulary being very slight).

General Distribution of languages.

160. Statistics of the distribution of the main language classified according to Sir G. A. Grierson's scheme are exhibited in Subsidiary Table I. The vernaculars of the provinces belong to one or other of the 2 linguistic families, *viz.*, the Tibeto-Chinese and the Indo-European with a sprinkling of unclassed languages. The languages of the Tibeto-Chinese family were returned by about 38,000 persons, or 2 *per mille* of the population in both the provinces. The languages of the Indo-European family are spoken throughout the provinces, nearly 25,514,000 persons (or 997 *per mille* in the Punjab and 990 in Delhi) having returned languages belonging to this head. The languages classed under the head "Indo-European family," belong chiefly to the Sanskritic sub-branch of the Indian branch of the Aryan sub-family, the number of the speakers of the Eastern group of the Eranian branch, Aryan sub-family, and of the non-Sanskritic language being 4 *per mille* and less than 1 *per mille* of the population, respectively. 2,521 persons in the Punjab speak unclassed languages of India, and Persian and English belonging to the Eranian and Teutonic groups of the Indo-European family, are spoken by 1,686 and 31,443 persons respectively in both the provinces. Persons speaking languages of the Dravadian family number 2,206 in the Punjab and 437 in Delhi while 6 persons were registered as speaking the Malaya language of the Malayo-polynesian family, in Rawalpindi (1), Patiala (2) and Delhi (3). A majority of the people speak languages of the Western group (Sanskritic sub-branch of Aryan sub-family) which isrep resented by Punjabi, Western Hindi, Rajasthani, and Western Pahari

The Punjabi is spoken by 60·6 per cent. of the population of the Punjab, and Western Pahari which belongs to the same sub-branch is the language of 4·4 per cent. of the population. Western Hindi, which comprises Urdu, Hindostani, and other Hindi dialects used in the Eastern districts of the Punjab and Delhi, is spoken by 14·2 and 94·1 per cent., and Rajasthani by 2·8 and 2·3 per cent. of the population in the Punjab and Delhi provinces respectively.

Tibeto-Chinese Family.

The Tibeto-Chinese family comprises the Tibeto-Burman languages, which are further divided into Tibeto-Himalayan languages (*e. g.*, Tibetan, Bhotia, Balti, Ladakhi belonging to the Tibetan group and Kanauri, Lahuli, Malani falling under the Western sub-group of the Pronominalised Himalayan group) and Assami-Burmese languages, such as Assamese and Burmese. The speakers of the languages of this family now aggregate 38,378 as against 41,615 in 1911. The figures of the Tibetan group and Pronominalised Himalayan group are noted in the margin. The figures against Bhotia (others) include 2,888 persons, who returned their language as Bhotani. All these persons were enumerated in the Kangra district, where the Bhotia spoken, closely resembles the Tibetan language: so these figures have been shown under the Tibetan group.

Language	Punjab.	Delhi.
TIBETAN GROUP.		
Tibetan	5,074	6
Bhotia (others)	3,994	..
Balti	10	..
Ladakhi	128	..
Total ..	9,206	6
PRONOMINALISED HIMALAYAN GROUP.		
Kanauri	22,098	..
Lahuli	6,578	..
Malani	396	..
Total ..	29,072	..

Assam-Burmese group.

161. *The languages belonging to the Tibeto-Chinese family which can be classed under the Tibeto-Burman sub-family are spoken by 203 immigrants enumerated in the places named in the margin.*

Name of District or State.	Burmese.	Assamese.
Attock	..	1
Rohtak	1	..
Simla	1	..
Jullundur	2	..
Ferozepore	4	..
Lahore	183	..
Rawalpindi	3	..
Kalsia	2	..
Simla Hill States	1	..
Delhi	3	2

Tibeto-Himalayan branch (Tibetan group).

162. This branch is divided into two groups of which the first is the Tibetan group, which includes the Tibetan and Bhotia. The pure Tibetan was returned chiefly from Simla, Kangra, Gurdaspur, Keonthal, Mandi, Patiala, and Bashahr. The Bhotia was registered in Kangra. The figures of Bhotia also include Balti, Bhotani, and those entries of Bhotia in which there was no specification of the country, and in which caste or tribe of the speakers did not admit of any definite classification.

Pronominalised Himalayan group (Western sub-group).

163. All the languages of this group that appear in the returns belong to the Western group, *i. e.*, Kanauri. Lahuli, and Malani. Kanauri is the language of Kanets in the Bashahr State, while Lahuli and Malani is confined to Lahul, a tract of the Kangra district. Lahuli was classified at the last census under the Tibetan group as distinguished from Chamba Lahuli; but the characteristics of both the languages being the same, no attempt has been made at the recent census to separate them.

The Dravadian family.

164. The Dravadian languages include Kanarese, Tamil, Telugu, Madrasi, and Malayalam. Tamil is the language of 2,314 immigrants of whom 1,923 were enumerated in the Punjab and 391 in Delhi. In the former province the Lahore district alone contributes 1,310 immigrants speaking Tamil. Telugu was returned by 264 persons in the Punjab and 46 in Delhi; while Malayalam is represented by 27 persons found in Ambala and Patiala.

Indo-European Family, Aryan Sub-Family.

Eranian branch.

165. The only languages belonging to the Eranian branch (Eastern group) of the Aryan sub-family are Balochi and Pashto.

(*a*) *Balochi.*—Balochi or the language of the Baloch nation was returned by 56,013 persons in the Dera Ghazi Khan district and 830 in the Bahawalpur State out of 57,145 persons registered in the Punjab as speaking this language. The number of speakers is 13,530 less than in 1911, though the strength

of Balochs by caste has fallen only from 532,499 to 532,148 during the last ten years. This shows that Balochs are giving up their tribal language and prefer to speak the dialects prevalent in those parts of the Punjab where they reside. The decrease of 12,908 in Dera Ghazi Khan among the Balochi-speaking population seems to be due to the general causes discussed in Chapters I and IV, which have affected the population of that district.

(*b*) *Pashto*.—Pashto is the language of Afghanistan. In the Punjab it is spoken by Pathan settlers in the border districts of Attock and Mianwali. In Attock the Chhachi tract close to the border of Hazara and Mianwali, and the part of the district which lies west of the Indus is inhabited by these Pathans. The different entries found in the enumeration books and classified as Pashto are Pashto (59,494), Afghani (171), Chhachi (32), Kabli (1), and Pathani (5). The number returned in both the provinces under this head is 59,703 as against 67,174 in 1911. The increase in the Mianwali district from 15,191 to 19,290 speakers is more than counterbalanced by the decreases, occurring in the Attock district and districts of the Lahore Division.

166. The only language belonging to the non-sanskritic sub-branch of the Indian branch of the Aryan sub-family spoken in the provinces is Kashmiri. The number of persons speaking this language was 8,523 in 1901 and 7,190 in 1911; but has now fallen to 4,690, a fact which shows that Kashmiris who have settled in these provinces have adopted the Punjabi language of their neighbours. This is amply proved if we compare the strength of Kashmiris returned in the caste Table XIII with that shown by the language table. Kashmiri now appears in the return as the language of 4,690 persons though Kashmiris themselves have a strength of 169,761; in other words only about 3 out of every 100 Kashmiris still retain their own language. The districts and States supplying the largest number of Kashmiris as speaking their own language are noted in the margin. The figures include immigrants who usually rush to the Punjab during the winter and earn their living generally by cutting wood. Non-Sanskritic sub-branch (Kashmiri).

Simla ..	746
Kangra ..	451
Lahore ..	647
Amritsar ..	567
Gurdaspur ..	485
Rawalpindi ..	710
Gujranwala ..	263
Chamba ..	306

North-Western Group.

167. Lahnda is the name given by Sir George A. Grierson to the language of the Western Punjab. It is difficult to draw any distinguishing line between Lahnda and Punjabi spoken in the Central and Eastern Punjab as it emerges into Lahnda very gradually. In the words of Sir George A. Grierson we may take a conventional line running north and south through the Eastern Central Punjab and call everything to the east of it Punjabi, and everything to the west of it Lahnda, but it must be understood that the change from one language to the other is so gradual that many typical Lahnda peculiarities will be found on the east of the line and many typical Punjabi peculiarities on the west. The conventional line adopted by Sir G. A. Grierson, is illustrated by the map on page 353 of the Punjab Census Report of 1911 and needs no further remarks. The various names under which Lahnda has been registered in different parts of the province are Lahnda (904,098), Dhanni (25), Dhanauchi (103), Jatki (631,914), Jhelumi (7), Kachhri (2), Multani (2,342,954), Peshawari (70), Pothowari (423,802), Thalochari (494), and Ubhechi (2). These names represent sub-dialects of Lahnda, which according to Sir G. A. Grierson, has 3 main dialects, *viz.*, Southern or Standard, North-Eastern, and North-Western. Lahnda.

The form of Lahnda which has been designed as the Standard is that spoken in the Doab of the district of Shahpur. It has three sub-dialects, the Standard proper, Multani, and Thali or Thalochari. The Standard proper is spoken in the Shahpur, Jhang, Lyallpur, Montgomery, Gujranwala and Gujrat districts, and the different names by which it goes are Jatki (in Jhang and Lyallpur), and Kachhri (in Kachhi or alluvial portion of the Jhang district). Multani is spoken in the districts of Multan, Muzaffargarh, *Dera Ghazi Khan and in the* Bahawalpur State. Multani differs from the Standard of the Shahpur Doab in pronunciation. Thal or Thalochari is found in the districts of Mianwali, Jhelum Shahpur, Jhang, and the north of Muzaffargarh. Standard Dialect.

North-Eastern Dialects.

The home of North-Eastern Dialect of Lahnda is the Pothowar plain in the Punjab, which consists of the eastern part of the district of Jhelum and the plains portion of the district of Rawalpindi. It is designated by several names based on the tribes using it. The form spoken in the Pothowar is known as Pothowari, and that used in Jhelum as Jhelumi. In the district of Attock it is called Awankari, and across the Indus as Peshawari or Hindko.

North-Western Dialect.

The North-Western Dialect beginning in the middle of the Salt Range extends in the Punjab northwards through Western Jhelum into the eastern part of the Attock district. In the Jhelum district it is known as Dhanni.

Lahnda is spoken now by altogether 4,303,479 persons, of whom 3,682,856 are residents of the Multan and Rawalpindi Divisions. In these divisions it is the language of nearly 50 per cent. of the population and the number of its speakers has fallen by 0·11 per cent. during the last ten years which is about 7 per cent. less than the rate of increase of the general population. The loss in percentage is due to the influx of large numbers of immigrants from the Central Punjab to the new colonies of Montgomery, Multan, Shahpur and Lyallpur.

Sindhi.

168. Sindhi as its name shows is the language of the province of Sindh but it extends beyond the borders of Sindh into the south-western corner of the Punjab. It is closely connected with Lahnda, and in the Southern Lahnda Dialect, Sindhi pronunciation is usually followed. The largest figures were returned from Bahawalpur (16,732) where Sindhi is indigenous, and Lahore (1,162) and Multan (350) which receive immigrants from Sindh on account of their being big trading centres.

Southern Group.

Marhati.

169. 1,511 persons were enumerated in both the provinces as speaking Marhati as against 815 in 1911. The majority of Marhati speakers was returned from Lahore division, which comprises important trading centres like that of Amritsar and Lahore. The different names employed to denote this language in the census returns were Dakhni and Konkani.

Eastern Group.

Oriya.

170. Oriya is returned for 3 persons in the Punjab who were found in the Ambala district, and for 1,177 persons in Delhi. The large number returned as speaking Oriya in the Delhi province is made up of immigrants from other provinces to Delhi on account of its now being a seat of the Government of India.

Bengali.

Bengali is spoken by 4,852 per... of the spe... in the Punjab and Delhi provinces, a large increase over the figures of ... is census. The increase is contributed mainly by Delhi 2,037 pe...oup that ap...y Lahore 680 persons, and the reason lies in the increased facilities ...and Malar... these places to immigrants for employment as clerks. ...uli and M... class...

Western Group.

Western Hindi.

171. The languages grouped under this head are Western Hindi, Rajasthani, Gujrati, Punjabi, and Western Pahari. Western Hindi, which includes Hindostani, Urdu, and other Hindi dialects, are spoken by 4,020,473 persons of whom 3,560,863 were enumerated in the Punjab. In both the provinces it is the language of 157 *per mille* of the population and the number of its speakers has risen by 5·07 per cent. during the last ten years, which is nearly equal to the rate of increase of the general population of the provinces.

Hindostani

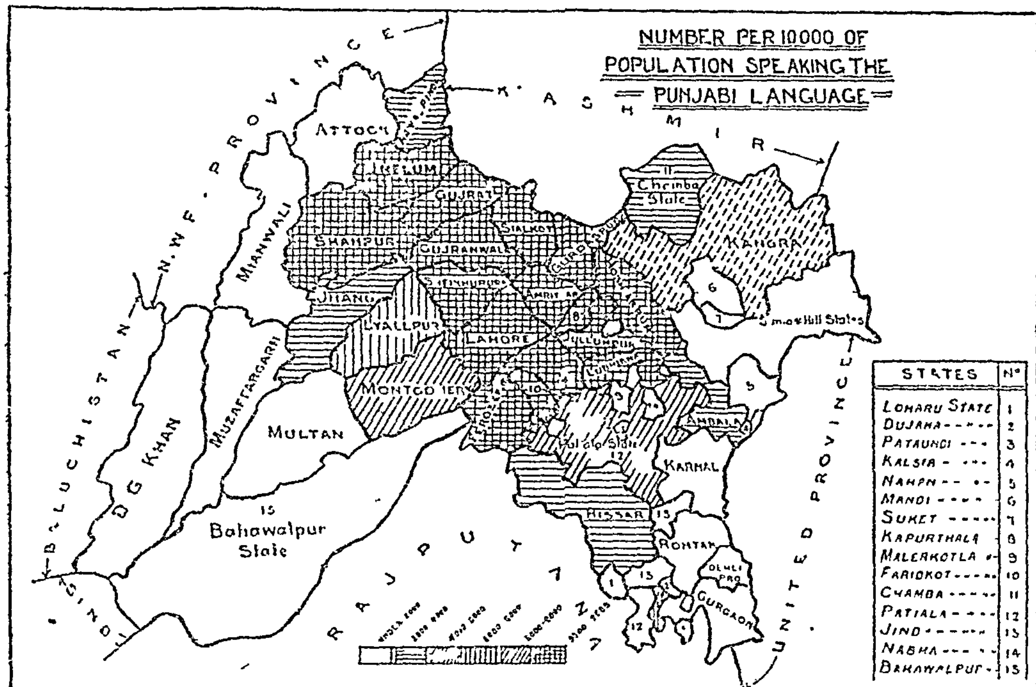
172. The three principal dialects of Western Hindi differ from one another very little in vocabulary and expression, and hence it is very difficult to define them properly. Hindostani literally means the language of Hindostan, but in the linguistic survey it is the name given to the dialect whose home is the Upper Gangetic Doab in the country round Karnal, Ambala, and Delhi, but which is commonly used as the *lingua franca* of India. It is capable of being written in both the Persian and Dev Nagri characters, and the excessive

use of Persian and Sanskrit words is generally avoided when it is used for literature. It now appears as the speech of 624,410 persons or 92,889 less than in 1911. The decrease in the number of Hindostani peakers has occurred on account of the large number of persons having given their language as Urdu in the districts noted in the margin where it is supposed to be the spoken language of the masses.

District.	Hindostani.		Urdu.	
	1911	1921	1911	1921
Hissar	1,070	183	7,585	14,840
Gurgaon	6,521	..	51,938	174,960
Delhi	329,835	104,180	161,427	309,020
Karnal	742,590	488,765	18,979	325,397
Ambala	435,086	2	2,568	407,560

173. Urdu, according to Sir George A. Grierson, is that form of Hindostani in whose vocabulary Persian words (including Arabic) are of frequent occurrence, and can, therefore, only be written in the Persian character. The name is said to be derived from the Urdu-i-Muallah or Royal Military Bazar outside the Delhi Palace. Urdu has been returned at this census as the mother tongue of 1,610,070 persons (1,301,051 in the Punjab and 309,020 in Delhi) which shows a large increase over the figures (494,290) of 1911. The local distribution of Urdu is indicated by the map printed below. It is in fact the most widely spoken Urdu.

Diagram 53



of all the dialects of Western Hindi, being the speech of 52 and 633 *per mille* of the population in the Punjab and Delhi provinces respectively. There is not a single district or State where its speakers have not been registered. The increase in the strength of the Urdu-speaking population has been more or less general throughout the provinces. The districts and States showing notable increases in Urdu are given in the margin. The general increase has resulted chiefly from the distinguishing line between the two dialects Hindostani and Urdu becoming indeterminate in the course of years. Modern Urdu is less Persianised than it was some 30 or 40 years back, and can claim to fulfil the requirements of a *ligua franca* capable of being understood over the whole of the Delhi Province and a great part of the Punjab. In proof of the above fact the reader is referred to the writings of K. B. Sheikh Abdul Qadir and the late Maulvi Nazir Ahmad which are remarkably free from

District and State.	1921	1911
Hissar ..	14,840	7,585
Rohtak ..	199,217	76,731
Gurgaon ..	174,960	51,938
Karnal ..	325,397	18,989
Ambala ..	407,560	2,568
Ferozepore ..	12,750	8,421
Montgomery ..	4,273	2,892
Multan ..	4,984	186
Nahan ..	8,345	3,627
Patiala ..	22,711	9,383
Delhi ..	309,020	161,427

Arabic and Persian expressions. The other cause of this increase is found in the Urdu-Hindi-Punjabi controversy observed in 1911 which resulted in all Musalmans returning their language as Urdu, instead of Hindostani, as distinguished from Hindi, a word adopted by Hindus for denoting Hindostani spoken by them. The publication of Urdu books and newspapers has also influenced the Urdu figures to some extent. One may conclude that the strength of partisan sentiment, and the small linguistic difference between Urdu and Hindostani are largely responsible for the violent fluctuations from census to census of the recorded numbers of Urdu speaking persons; here if everywhere a decision must be reached not by the mere counting of heads but by the refined methods of analysis of ethnographic and linguistic scholarship.

The statement drawn up in the margin shows the districts and States in which important decreases have taken place during the past decade in Urdu figures. The decrease in Lahore and Pataudi seems to be due to the proper care exercised in the filling in of Language column of the schedule, because these two places were specially noted in 1911 for the inaccuracy, so far as the registration of Urdu was concerned. In Rawalpindi the decrease is due to the replacement of Urdu by Hindostani for causes unknown to the writer. In 1911 one person was returned as speaking Hindostani and 16,452 persons as speaking Urdu, while the present figures show 11,574 speaking Hindostani and 2,696 Urdu. In Nabha State where Musalmans are in minority, the decrease appears to be the natural result of Urdu. Hindi and Punjabi controversy, the name Hindi having been substituted for Urdu as the figures quoted in the margin will show. The other decreases do not require any special explanation.

District or State.	Decrease.
Simla	1,332
Lahore	2,386
Amritsar	2,500
Sialkot	2,694
Rawalpindi	13,756
Pataudi	15,636
Malerkotla	1,495
Faridkot	1,453
Nabha	6,113

	1911	1921
Urdu ..	7,326	1,213
Hindi ..	68,819	75,256

Other Hindi. 174. The entries classified under this head are Ahirwal, Ahirwati, Arya Bháshá, Bangar, Bangaru, Bhasha, Bhojwali, Brigashi, Brij Bháshá, Brijki, Deswáli, Dev Nágri, Hariani, Hindi, Hirwai, Jati, Khadri, Nagri, Purbi, Ráná, Bháshá, Shástri, Shuáwati. Hindi pure can be called that form of Hindostan which contains Sanskrit words and hence can only be written in Dev Nagri characters. The chief dialects of Hindi spoken in these provinces are Jati, Deswáli, Bangri, Ahirwati, Hariani, and Purbi. The first five names represent the dialect spoken in the Bangar and Kádher tracts which is designated by various names according to locality and caste of the speakers. The tract on the west bank of the river Jumna in the districts of Karnal and Delhi is described in the linguistic survey as Khadir, while the Bangar tract extends right across the Karnal district into the State of Patiala and includes portion of Jind, Rohtak, and Gurgaon districts. Purbi was registered in almost every district or State, and is the dialect of immigrants from the United Provinces. The gain of 7,116 since 1911 in the Hindi-speaking population is due to the causes discussed under Urdu.

Rajasthani. 175. Rajasthani or the language of Rajputana has been returned by 713,761 persons (702,996 in the Punjab and 10,765 in Delhi) as against 725,850 in 1911. Its important dialects are Bagri, Marwari and Mewati whose strength is given in the margin. The other entries found in the sorters' tickets and classified under Rajasthani are detailed on the title page to Table X. Of these three main dialects Bagri and Mewati are the only indigenous languages of the provinces. The districts where Bagri is mostly used are Hissar (185,732), Gurgaon (60,278), Ferozepore (44,615), Loharu (20,232), Patiala (138,494), and Jind (2,567). Mewati is the spoken language of the Gurgaon district. Marwari is the language of Marwari immigrants or their descendants. In Delhi alone which is the chief trading centre it is returned for 9,274 persons. In Bahawalpur the figures 23,908 under this head are open to doubt and probably refer to Bagri.

	Punjab.	Delhi.
Bagri ..	459,996	1,487
Marwari ..	36,063	9,274
Mewati ..	206,178	4

Gujrati.

176. Gujrati which is not a vernacular of the province appears in the returns as the language of 1,895 persons.. All these are immigrants scattered over the provinces, the districts returning above 100 are named in the margin.

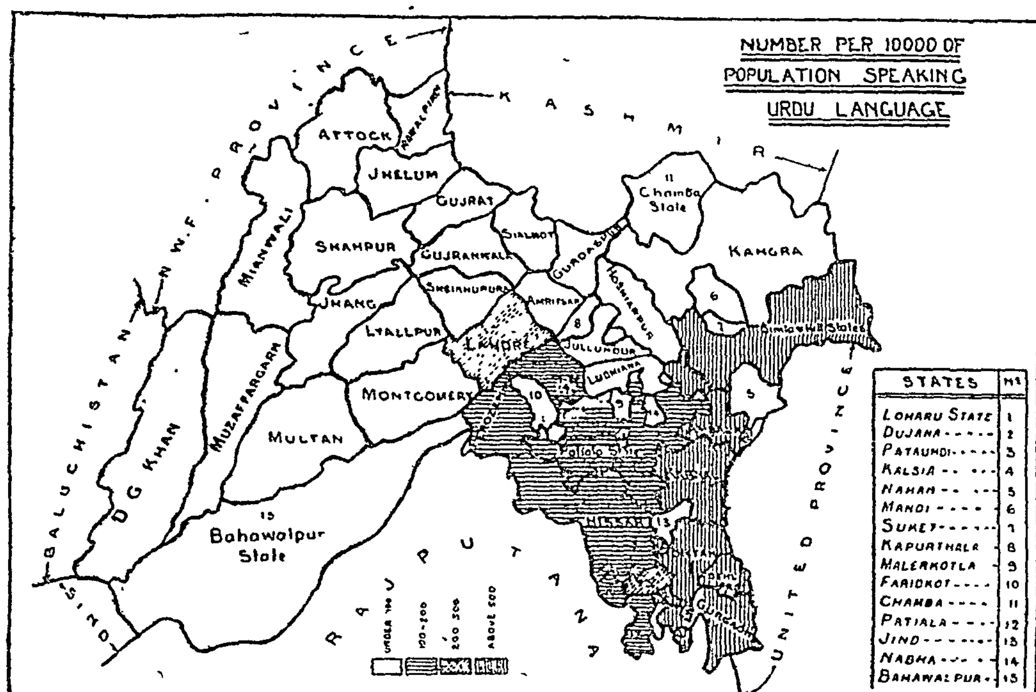
Lahore	582
Rawalpindi	283
Mianwali	110
Multan	239
Delhi	502

Punjabi.

177. Punjabi is the dominant language of the Punjab, and it is spoken over the greater part of the eastern half of the province with the exception of Simla Hill States and Kulu (district Kangra), where the language spoken is Pahari, and in the Ambala, Karnal, Hissar, Rohtak and Gurgaon districts where the language used is some form of Hindostani. It is now spoken by 15,215,120 persons (15,207,955 in the Punjab and 7,165 in Delhi) or nearly by 606 and 15 *per mille* of the population in the Punjab and Delhi, respectively. The map printed below indicates the distribution of Punjabi language by districts and States per 10,000 of the population.

Map indicating the distribution of Punjabi Language.

Diagram 54



Its strength has increased by 7·8 per cent. since 1911. The districts and States showing considerable increases are grouped in the margin. In the places in group I the increase is more or less equal to the increase in the general population during the period 1911—1921. In Ambala and Faridkot the figures appear to have been exaggerated at the expense of Western Hindi, whose figures show a decrease of 28,279 speakers in Ambala and 2,210 in Faridkot. The figures of Gujrat have been effected by the transfer of considerable areas from the Shahpur district. In Rawalpindi, Attock, Mianwali, Jhang and Multan, it seems that probably Punjabi has been wrongly entered in place of Lahnda. The increase in Nalagarhi is accounted for by the proper classification of the dialect known as Nalagarhi, which is nothing but a species of Punjabi and quite different from Western Pahari. The abnormal increase in Chamba is attributable to wrong classification or mistakes at enumeration.

Group.	District.	Increase.
1.	Hoshiarpur ..	13,067
	Jullundur ..	18,870
	Ludhiana ..	50,947
	Ferozepore ..	164,921
	Lahore ..	89,589
	Amritsar ..	51,240
	Shahpur ..	37,481
	Montgomery ..	57,812
	Lyallpur ..	64,783
	Bilaspur ..	4,658
	Kapurthala ..	17,092
	Patiala ..	102,797
	Jind ..	11,417
	Nabha ..	14,809
2.	Ambala ..	25,976
	Gujrat ..	78,899
	Rawalpindi ..	60,172
	Attock ..	90,428
	Mianwali ..	43,323
	Jhang ..	155,174
	Multan ..	17,768
	Faridkot ..	26,801
	Nalagarh ..	18,450
	Chamba ..	14,034

Important decreases have occurred in the strength of Punjabi speakers in the Kangra (219,433), Sialkot (38,406) and Jhelum (53,588) districts and Kalsia (11,413) and Nahan (4,755) States. In 1911 all persons in the Kangra district (except the Kulu Sub-division) were classed as speaking Dogri, a dialect of Punjabi: but at the present census no rigid geographical distinction was adopted, and the recorded number of Punjabi-speaking persons in Kangra has dropped from 7,955 per 10,000 in 1911 to 5,125 in 1921. Prior to 1911 only about 4 per cent. of persons are recorded as Punjabi speakers in the Kangra district, the remainder having been shown as speaking Pahari. The apparent decrease in Sialkot has resulted from the transfer of the major portion of Raya Tahsil to the Sheikhupura district. In Jhelum there has been a general decrease in the population, and also most of the population returned in 1911 as speaking Punjabi has been classified as Lahnda-speaking, in accordance with the Linguistic Survey. In Kalsia and Nahan States Punjabi speakers appear to have been erroneously enumerated as Hindi speakers.

Dialects of Punjabi.

The two well-known dialects of Punjabi are Standard Punjabi and Dogri. The former is spoken in the plains of the Punjab and a portion of the neighbouring Simla Hill States, the latter chiefly in the Kangra district and in those parts of Sialkot, Gurdaspur and Chamba, which adjoin the Kangra district and Jammu State.

Standard Punjabi.

178. The purest form of Standard Punjabi, according to Sir G. A. Grierson, is Manjha or Punjabi spoken by Jats of the Manjha, the Sikh tract of the Central Punjab north of the Sutlej. The different entries in the census schedules designating Standard Punjabi were Punjabi (14,795,309) Bilaspuri (627), Kahhuri (347), Malwai (104), Gurmukhi (26), Lahori (27), Jangli (1), and Nalagarhi (1). Kahhuri or Bilaspuri was returned by 605 persons in Mandi, and by 159 in Suket, while the dialect spoken in Bilaspur itself was returned as "Punjabi": Malwai sub-dialect of Punjabi was recorded in the Ferozepore district. Bilaspuri in censuses previous to 1911 was called Pahari, but now, as has just been observed, is shown as Punjabi. Gurmukhi, which is a script and not a dialect, appears as the spoken language of 22 persons in Gujrat and of 311 in Delhi.

Dogri.

179. The entries classed as Dogri are noted in the margin with their respective strength. The aggregate now returned under this head is 418,678 as against 757,375 in 1911. The largest decreases have occurred in Kangra (218,717), Gurdaspur (82,698), and Sialkot (51,634). The decrease in Kangra, as already explained in para. 177, is due to the classification under Western Pahari of some of the population which was shown in 1911 as speaking Dogri. In Sialkot and Gurdaspur no differentiation seems to have been made between Standard Punjabi and Dogri (the two dialects of Punjabi), and the word Punjabi was used for both these dialects: hence we find that there is no falling off in the total strength of persons returned as speaking Punjabi at the last two censuses.

Dogri	..	..	394,450
Jamnali	..	..	845
Kandiali	..	..	21,896
Kangri	..	..	1,483
Bhatiali	..	..	4

Western Pahari.

180. Western Pahari, according to Sir G. A. Grierson, is the Aryan language spoken in that part of sub-Himalaya, which extends from the Jaunsar Bawar tract of the district of Dehra Dun to Bhadarwah in the Northern Punjab. It is bounded on the East by Garhwali, on the North by the Tibeto-Chinese languages, on the South by Hindostani and Punjabi, and on the South-west by Dogri. Grierson holds that the speakers of Western Pahari are of mixed origin, the original inhabitants of this tract, the Khasa Gujjars, having been conquered and assimilated by Rajput immigrants from the south. Inter-marriage between Rajputs and Khasa Gujjars, and a fusion of the languages spoken by them formed the natural sequence of the invasion; and it is for this reason that Western Pahari and Rajasthani are akin.

The comparative statement in the margin shows the number of persons speaking dialects of the five groups, *viz.*, (*a*) Simla Group, (*b*) Kulu Group, (*c*) Mandi Group, (*d*) Chamba Group, and (*e*) others, into which Western Pahari was divided at this and the last censuses. It is now spoken by 1,097,021 persons, or 44 *per mille* of the total population as against 933,363 in 1911. The figures of the present census show an increase of 115,518 or 14 per cent. excluding

Census.	Total.	(*a*) Simla Group.	(*b*) Kulu Group.	(*c*) Mandi Group.	(*d*) Chamba Group.	(*e*) Others.
1921 ..	1,097,021	427,710	126,793	237,934	139,262	165,322
1911 ..	993,363	405,008	122,970	237,377	136,138	91,870

the figures in group (*e*) over the estimated figures (816,181) for 1891 given in the linguistic survey for the above four groups, while the increase in population in Nahan, Jubbal, Bhagal, Keonthal, Kulu, Mandi, Suket and Chamba, where Western Pahari is chiefly spoken, is about 23 per cent. since 1891. The difference between these two percentages is due to the classification of some of the Pahari entries belonging to these four groups under "others" for want of the specification of the dialects to which they belonged.

Simla group.

181. The Simla group consists of a number of dialects and sub-dialects detailed on the title page to Table X. Figures of the important dialects are given in the margin for the present census. Kochi is chiefly spoken in the Bashahr State, where 60,678 persons speaking this dialect were enumerated, the other places where its speakers were noted being Keonthal (166), Bhagal (804), and the Minor Simla Hill States (524). Keonthali is spoken in the Keonthal State and the central portion of the States round the Simla district. It was returned by 28,239 persons in Keonthal, and by (23,752) persons in Bhagal. In other places the largest figures (9,611) were noted in the Minor Simla Hill States. Sirmuri is the languages of Sirmur or Nahan, and that part of the Jubbal State which adjoins Nahan, while Bhagli is confined to Bhagal and Kunihar States.

Kochi	62,172
Keonthali	62,013
Sirmuri	56,082
Bhagli	18,804

Kulu group.

182. The dialects included in the Kulu group are Koli, Kuluhi, and Kulu-Suraji. These dialects are chiefly spoken in Kulu proper and the number of their speakers has risen from 122,970 in 1911 to 126,793 in 1921.

Mandi group.

183. The Mandi group includes Mandiali and Suketi, which are the languages of Mandi and Suket States, and a few entries of Mandi, Suraji and Naraingarhi. This group is now represented by 237,934 persons.

Chamba group.

184. This group comprises the dialects known as Bhadarwahi, Bharmauri, Chamiali, Chambiali, Churahi, and Gadi, which were recorded mostly in the Chamba State.

Northern Group.

Central Pahari (Garhwali).

185. The term Central Pahari denotes a group of dialects spoken in Kamaun and Garhwal in the United Provinces. The strength is shown in the margin. Among the States the largest figures come from Keonthal (169) and Jubbal (289) where the number of immigrants from Garhwal and Teri Garhwal was 160 and 215 respectively.

Ambala	9
Simla	176
Kangra	46
Hoshiarpur	18
Rawalpindi	18
Mianwali	1
Multan	6
Punjab States	756
Delhi	53

Eastern Pahari (Naipai).

186. Eastern Pahari commonly known as Naipali or Gorkhali, is the Aryan language spoken in the State of Nepal. At this census, it was returned by 9,301 persons (9,243 in the Punjab and 58 in Delhi) while in 1911 its speakers numbered 8,653. The increase is probably due to the increase in the number of Gurkha soldiers employed during the decade. The places returning figures of Naipali speakers above 100 are Kangra (2,236), Lahore (566), Gurdaspur (2,581), Rawalpindi (2,591), Nahan (256), Mandi (197), and Chamba (461).

Gypsy Dialects.

187. The figures for Gypsy dialects represent a decrease of 9,615 as compared with the 1911 figures but the returns are doubtful, as was noted in the opening paragraph of this chapter. It is true that most of the members of castes such as Bawaria, Sansi, can understand the Punjabi language, but their mother-tongue has undergone very little change. Of the Gypsy dialects enumerated at the present census the most important is Odki spoken by 2,516 members of the "Od" tribe. The Ods are nomads who usually wander about with their families in search of employment on earth-work, often taking with them enormous herds of sheep and goats.

Other Languages.

Asiatic Languages.

188. The speakers of other Asiatic languages aggregate 1,793 as against 2,745 in 1911 in both the provinces. The general falling off under this head is due to the decrease of 685 persons speaking Persian. Arabic has been returned by 45 persons in the Punjab and by 8 in Delhi, but it is not clear whether some of those who have given their language as Arabic are merely Arabic scholars or genuine Arabs.

Non-Asiatic Languages

189. English is the only important non-Asiatic language being spoken by 26,829 persons in the Punjab and 4,614 in Delhi. Out of the total of 31,728 persons enumerated as speaking the languages of this group, English speakers now represent 1 and 10 *per mille* of the population of the Punjab and Delhi provinces, respectively. The strength of the language is 202 more than the total number of Europeans, Armenians and Anglo-Indians given in Imperial Table XVI : but for this comparison, 285 persons have to be added who returned other European languages, which means an excess of 485 persons. The excess is explained by the fact that well-educated Indians and Indian-Christians have begun to use English in their homes. The distribution of the English language by districts and States depends mainly upon the presence of military cantonments and big official and business concerns. Hence we find that greatest number of English speakers (6,706) is returned from Rawalpindi where a big cantonment is located. The next in importance are Lahore and Delhi with 4,991 and 4,614 English speakers, both of these places being the Headquarters of the respective provincial Governments. The detail of other languages returned under this head is as follows :—

Portuguese (211), French (18), Dutch (3), Flemish (20), German (1), Greek (12), Irish (8), Italian (11), and Russian (1).

Miscellaneous.

Remarks about Linguistic boundaries.

190. In the Punjab and Delhi provinces, generally speaking, there are no fixed natural boundaries of the kind described in the linguistic survey for the different languages and reproduced in the discussion about each language in this chapter, which act as insuperable barriers to language. The boundaries of language are nebulous and indeterminate, and there is no sharp transition as we pass from one locality to the adjacent one. The result is that any attempt at a demarcation of boundaries is apt to be misleading, because different dialects shade off one into another so gradually that it is not always possible to say that dialect A belongs to one language and dialect B to another. It is for this reason that the native of one part of the Punjab can express himself and be understood in another. There are many words and expressions common to the different dialects of the province. The dialects differ from each other in vocabulary rather in grammar and they are, in fact, nothing but variants of the main language as spoken by the different classes, castes or tribes or in different localities.

The influence of Education on local dialects.

191. Education has done little to obliterate local dialects but in so far as literacy in English has increased owing to its use as a medium of instruction, the incorporation of English words and phrases has, in many instances, led to uncouth and hybrid forms of speech. Thus though well-educated Indians with a few notable exceptions still speak the dialects they always spoke, yet it is common to find them using a certain proportion of English and other foreign words in their conversation. Indians use English words and phrases not only when talking to an Englishman, but also to each other; this does not, however, mean that local dialects are not developing in a natural way. The use of foreign words is not confined to Indian languages but such borrowing occurs in every language. It is thus clear that education has so far tended very little, during the past 30 or 40 years, to the unification of languages, and it is unlikely that local dialects will disappear whether we adopt English, Urdu, Hindostani or Punjabi as the medium of Primary Education. At present a boy, who is educated at a school where Urdu is the medium of instruction, does not only not speak Urdu at his home, but never cares to keep his knowledge of it alive after he leaves school. This argument is sufficient to take much of the sting out of the controversy which has raged over the merits and demerits of Hindi, Urdu or Punjabi as the medium of instruction in Primary Schools.

Literary activity in different languages.

192. The number of newspapers and periodicals has risen from 74 in 1891, 166 in 1901, 229 in 1911 to 270 in 1921. Of these 270, 45 are written in English, 181 in Urdu, 27 in Gurmukhi, 13 in Hindi, and 4 in mixed languages. The above figures show that Urdu is the most popular medium for the circulation of news, the number of Urdu papers having increased from 64 to 181 during the past 3 decades. There is a great deal of literary activity in other languages which indicates the general awakening among the masses. Many periodicals are of

a communal character, and these generally deal with matters concerning the community in the interests of which they are founded. The comparative statement below shows the increase in the number of newspapers of different languages, since 1891—

Year.	Total.	English.	Urdu.	Gurmukh .	Hindi.	Bilingual.
1891	74	4	64	1	3	2
1901	166	17	135	5	7	2
1911	229	25	177	17	9	1
1921	270	45	181	27	13	4

These figures, however, somewhat exaggerate the journalistic success, if not the journalistic enterprise of the province, and at the moment of writing (March 1923) the number of "live" papers circulating in the Punjab is only 236, including dailies, weeklies and other periodicals.* Most of these publications have a circulation of under 2,000 copies, the actual total circulation as reported for 1921 being given by the figures in the margin. The total circulation of daily papers only amounts to one for every 222 persons in the province. This suggests an ignorance of and indifference to public events and contemporary public opinion, which is far from being the case. Actually for every paper printed or sold there are 20 persons who read its contents, or listen to it being read in the street of the smaller towns, or in the "chaupals" of the larger villages, and the men who listen will in their turn pass on it at least a part of the news to their women folk, or to friends and relations when visiting villages remote from lines of railway or off the main routes.

Circulation of the Newspapers and Periodicals in the Punjab in 1921.

Dailies	113,072
Weeklies	159,680
Monthlies	95,170
Others	26,371

183. The number of books published during the decade 1912—1921, inclusive, and the languages in which they were published are shown in the margin. The details are given for each year since 1912 to 1921 in Subsidiary Table III. Over two-thirds of the total number of books published in the Punjab are in either Urdu or Punjabi; English books form about 10·5 per cent. of the books published. English seems to have lost ground since 1918 when books in English were nearly 15 per cent. of the whole, but the rise in 1915—1918 was clearly only a circumstance arising from the war, and compared to the pre-war years English more than holds it own.

Urdu ..	6,282	Persian ..	156
Punjabi ..	6,162	Sanskrit ..	86
English ..	1,826	Pashto ..	54
Bilingual ..	1,354	Multani ..	53
Hindi ..	748	Kashmiri ..	24
Arabic ..	291	Polyglot ..	21
Trilingual ..	174	Others ..	17
Sindhi ..	162		
		Total ..	17,410

* The only illustrated paper published at present in the Punjab is "The Nation," which is written in English and has a Sunday supplement.

I. Distribution of total population by language according to Census. II. Distribution by language of the population of each district. III. Showing the number of books published annually in each language from 1911 to 1921.

SUBSIDIARY TABLE I.

Distribution of total population by language.—according to Census.

Language (with main heads given in Sir George Grierson's classified scheme).	Total number of speakers (000's omitted).				Number *per mille* of the population.		Where chiefly spoken.
	Punjab.	*Delhi.*	*Punjab and Delhi.*				
	1921.	1921.	1921.	1911.	Punjab.	Delhi.	
1	2	3	4	5	6	7	8
TOTAL	25,101	488	25,589	24,188	..	..	
		PART I—INDIAN LANGUAGES.					
I.—TIBETO-CHINESE FAMILY Tibeto-Burman Sub-Family Tibeto-Himalayan branch ..	38	..	38	42	2	..	
(a) *Tibetan Group* ..	*9*	..	*9*	*11*	*1*	..	
1. Tibetan	5	..	5	5	1	..	Simla, Kangra, Gurdaspur, Keonthal, Mandi, Patiala and Bashahr.
2. Bhotia (others) ..	4	..	4	6	..	..	Kangra.
3. Others	..	..	..	..	..	..	
(b) *Pronominalized Himalayan Group. Westren Sub-Group* ..	*29*	..	*29*	*31*	*1*	..	
1. Kanauri ..	22	..	22	23	1	..	Bashahr.
2. Patni	..	..	..	5	..	..	
3. Rangloi	..	..	..	1	..	..	
4. Lahuli	7	..	7	1	..	..	Chamba and Kangra.
5. Bunan or Gahri ..	..	..	..	1	..	..	
II.—INDO-EUROPEAN FAMILY—Aryan Sub-family ..	25,031	[483	25,514	24,095	997	990	
(i) Eranian Branch (*Eastern Group*) ..	**116**	..	**116**	**138**	5	..	
1. Balochi	57	..	57	71	2	..	Dera Ghazi Khan and Bahawalpur.
2. Pashto	59	..	59	67	3	1	Rawalpindi, Attock, Mianwali and Dera Ghazi Khan.
(ii) Indian Branch							
NON-SANSKRITIC SUB-BRANCH	24,915	483	25,398	23,957	992	989	
Kashmiri	5	..	5	7	..	..	Simla, Kangra, Lahore, Amritsar, Gurdaspur, Rawalpindi, Gujranwala and Chamba.
SANSKRITIC SUB-BRANCH ..	24,910	483	25,393	23,950	992	989	
(a) *North-Western Group* ..	*4,323*	..	*4,323*	*4,278*	*172*	..	
1. Lahnda or Western Punjabi ..	4,303	..	4,303	4,254	171	..	Lahore, Shahpur, Jhelum, Rawalpindi, Attock, Mianwali, Montgomery, Lyallpur, Jhang, Muzaffargarh, Dera Ghazi Khan and Bahawalpur.
2. Sindhi	20	..	20	24	1	..	Lahore, Multan and Bahawalpur.
(b) *Southern Group* ..	*4*	*2*	*6*	*1*	..	*4*	
1. Marathi	1	..	1	1	..	..	Ambala.
2. Others	3	2	5	..	..	4	
(c) *Eastern Group* (*Bengali*)	*2*	*3*	*5*	*2*	..	*6*	Lahore, Simla, Rawalpindi and Delhi.
(d) *Western Group* ..	*20,571*	*478*	*21,049*	*19,659*	*820*	*979*	
1. Western Hindi ..	3,561	459	4,020	3,827	142	941	Ambala Division, Ferozepore, Lahore, Rawalpindi, Sialkot, Dujana, Pataudi, Kalsia, Nahan, Patiala, Jind, Nabha and Delhi.
(1) Hindostani ..	520	104	624	1,554	21	213	Karnal, Rawalpindi, Lahore and Delhi.
(2) Urdu	1,301	309	1,610	494	52	633	Rohtak, Gurgaon, Karnal, Ambala and Delhi.
(3) Other Hindi ..	1,740	46	1,786	1,779	69	95	Hissar, Rohtak, Gurgaon, Karnal, Kalsia, Nahan, Jind, Nabha and Delhi.
2. Rájasthání ..	703	11	714	726	28	22	Hissar, Gurgaon, Ferozepore, Loharu, Patiala and Bahawalpur.
(1) Bágri ..	460	2	462	468	18	3	Hissar, Gurgaon, Ferozepore, Loharu, Patiala and Jind.
(2) Márwári ..	36	9	45	46	2	19	Bahawalpur.
(3) Mewáti ..	206	..	206	209	8	..	Gurgaon.
(4) Others ..	1	..	1	3	..	..	

SUBSIDIARY TABLE I.

Distribution of total population by language.—According to Census—concluded.

Language (with main heads given in Sir George Grieson's classified scheme).	Total number of speakers (000's omitted).				Number *per mille* of the population.		Where chiefly spoken.
	Punjab.	*Delhi.*	*Punjab and Delhi.*				
	1921.	1921.	1921.	1911.	Punjab.	Delhi.	
1	2	3	4	5	6	7	8
3. Gujráti	2	1	3	2	..	1	Lahore, Rawalpindi, Multan and Delhi.
4. Punjabi	15,208	7	15,215	14,111	606	15	Hissar, Ambala, Jullundur, Lahore Division, Gujrat, Shahpur, Jhelum, Montgomery, Lyallpur Kalsia, Bilaspur, Nalagarh, Kapurthala, Malerkotla, Faridkot, Phulkian States and Bahawalpur.
1. Standard ..	14,789	7	14,796	13,354	589	15	Hissar, Ambala, Jullundur and Lahore Divisions except Kangra, Gujrat, Shahpur, Jhelum, Montgomery, Lyallpur, Kalsia, Bilaspur, Nalagarh, Kapurthala, Malerkotla, Phulkian States and Bahawalpur.
2. Dogri	419	..	419	757	17	..	Kangra, Gurdaspur, Sialkot and Chamba.
5. *Western Pahári* ..	*1,097*	..	*1,097*	*993*	*44*	..	
(*a*) Simla Group ..	428	..	428	405	17	..	Kangra, Simla Hill States and Nabha.
(*b*) Kulu Group ..	127	..	127	123	5	..	Kangra, Simla Minor Hill States and Mandi.
(*c*) Mandi Group ..	238	..	238	237	9	..	Mandi and Suket.
(*d*) Chamba Group ..	139	..	139	136	6	..	Chamba and Kangra.
(*e*) Others ..	165	..	165	92	7	..	Simla, Kangra, Gurdaspur, Rawalpindi, Chamba, Simla Hill States, Nahan and Mandi.
(*c*) *Northern Group* ..	*10*	..	*10*	*10*	..	..	
1. Central Pahári ..	1	..	1	1	..	..	Simla, Keonthal, Simla Minor States.
2. Eastern Pahári ..	9	..	9	9	..	..	Kangra, Gurdaspur and Rawalpindi.
III.—UNCLASSIFIED LANGUAGES.	3	..	3	12	..	..	
1. Báwaria	..	..	..	4	..	..	
2. Odki	3	..	3	5	..	..	Dera Ghazi Khan.
3. Labáni	..	..	..	2	..	..	
4. Others	..	..	..	1	..	..	
PART II.—OTHER LANGUAGES.							
INDO-EUROPEAN FAMILY ..	29	5	34	39	1	10	
(*a*) *Eranian Group* (Persian)	*2*	..	*2*	*3*	..	..	Lahore, Ludhiana and Rawalpindi.
(*b*) *Teutonic Group* (English)	*27*	*5*	*32*	*36*	*1*	*10*	Ambala, Simla, Jullundur, Ferozepore, Lahore, Sialkot, Rawalpindi, Multan and Delhi.

SUBSIDIARY TABLE II.

Distribution by language of the population of each district.

District or State and Natural Division.	Number per 10,000 of the population speaking											
	Punjabi.	Lahnda.	Western Hindi.				Western Pahari.	Rajasthani.	Balochi.	Pashto.	English.	Others.
			Total.	Urdu.	Hindustani.	Other Hindi.						
1	2	3	4	5	6	7	8	9	10	11	12	13
PUNJAB	**6,059**	**1,714**	**1,419**	**519**	**207**	**693**	**437**	**280**	**23**	**23**	**11**	**34**
Indo-Gangetic Plain West ..	**6,791**	**6**	**2,562**	**736**	**439**	**1,387**	**36**	**584**	..	**5**	**7**	**9**
1. Hissar	2,331	1	5,355	182	2	5,171	..	2,308	..	..	1	1
2. *Loharu State*	..	..	188	188	..	..	1	9,811	..	..	..	..
3. Rohtak	8	..	9,983	2,580	..	7,403	..	8	..	..	1	..
4. *Dujana State*	..	..	10,000	10,000	..	..	..	..	..	..	..	..
5. Gurgaon	11	..	6,082	2,565	..	3,517	..	3,904	..	..	2	1
6. *Pataudi State* ..	10	..	9,990	2,156	..	7,834	..	..	..	..	..	..
7. Karnal	121	..	9,872	3,927	5,898	47	..	5	..	1	..	1
8. Jullundur	9,888	..	98	81	3	14	..	..	..	2	10	2
9. *Kapurthala State* ..	9,981	..	16	12	1	3	..	1	..	..	1	1
10. Ludhiana	9,920	..	67	49	4	14	..	8	..	..	1	4
11. *Malerkotla State* ..	9,968	..	31	21	4	3	..	..	..	..	1	..
12. Ferozepore	9,334	..	230	116	35	79	..	419	..	2	13	2
13. *Faridkot State* ..	9,825	..	57	37	..	20	..	111	..	5	1	1
14. *Patiala State*	8,634	..	177	151	8	18	259	926	..	..	2	2
15. *Jind State*	1,904	..	7,992	240	5	7,747	1	97	..	1	4	1
16. *Nabha State* ..	7,081	..	2,904	46	..	2,858	1	12	..	..	..	2
17. Lahore	9,366	57	413	311	48	54	14	10	..	33	41	63
18. Amritsar	9,925	..	53	40	3	10	6	3	..	..	6	9
19. Gujranwala	9,927	5	51	37	8	6	1	4	..	5	2	5
20. Sheikhupura	9,883	1	85	44	31	10	..	9	..	12	1	9
Himalayan	**3,406**	**1**	**267**	**85**	**3**	**179**	**6,038**	**1**	..	**4**	**20**	**263**
21. *Nahan State*	588	..	2,611	594	..	2,017	6,768	7	..	1	1	24
22. Simla	995	1	1,413	1,231	24	155	6,514	12	..	8	682	371
23. *Simla Hill States* ..	1,804	8	29	9	2	18	7,233	1	..	1	3	921
24. *Bilaspur State* ..	9,965	..	1	1	..	..	33	..	..	..	..	1
25. Kangra	5,135	..	30	4	6	20	4,615	..	..	6	2	182
26. *Mandi State*	166	..	3	1	..	2	9,793	..	..	1	8	29
27. *Suket State*	29	..	2	1	1	..	9,967	..	..	..	..	2
28. *Chamba State* ..	2,075	..	8	7	..	1	7,846	..	..	8	1	62
Sub-Himalayan	**7,666**	**1,899**	**850**	**721**	**23**	**106**	**10**	**1**	..	**37**	**21**	**16**
20. Ambala	3,824	..	6,110	5,980	..	130	8	3		3	40	12
30. *Kalsia State*	1,710	..	8,277	21	1	8,255	..	5	..	1	..	1
31. Hoshiarpur	9,987	..	11	7	2	2	..	..	..	..	1	1
32. Gurdaspur	9,900	..	43	23	1	19	9	4	..	1	4	39
33. Sialkot	9,916	..	58	48	1	9	..	3	..	1	20	2
34. Gujrat	9,950	1	43	33	6	4	..	..	..	3	1	2
35. Jhelum	9,503	471	17	13	1	3	1	..	..	4	2	2
36. Rawalpindi	2,460	6,953	289	48	203	38	78	2	..	22	118	78
37. Attock	1,803	7,781	26	5	18	3	..	..	..	380	8	2
North-West Dry Area ..	**8,894**	**5,725**	**141**	**37**	**7**	**97**	**1**	**55**	**94**	**52**	**4**	**34**
38. Montgomery	8,175	1,644	103	60	19	24	..	39	1	35	1	2
39. Shahpur	9,670	266	48	34	..	14	..	1	..	13	1	1
40. Mianwali	1,278	6,855	1,310	52	12	1,246	..	3	..	539	7	8
41. Lyallpur	6,998	2,846	111	53	5	53	5	23	..	15	1	1
42. Jhang	3,213	6,730	41	3	2	36	..	2	..	13	..	1
43. Multan	556	9,284	93	56	17	20	..	29	..	11	19	8
44. *Bahawalpur State* ..	1,528	7,851	65	43	..	22	..	319	12	6	1	218
45. Muzaffargarh	43	9,913	20	4	..	16	..	7	..	12	4	1
46. Dera Ghazi Khan ..	27	8,697	2	2	..	..	..	2	1,130	94	..	48
DELHI	**147**	..	**9,418**	**6,830**	**2,132**	**951**	**9**	**221**	..	**7**	**95**	**108**
Indo-Gangetic Plain West ..	**147**	..	**9,418**	**6,830**	**2,132**	**951**	**9**	**221**	..	**7**	**95**	**108**
1. Delhi	147	..	9,413	6,330	2,132	951	9	221	..	7	95	108

SUBSIDIARY TABLE III.

Showing the number of books published annually in each language from 1911 to 1921.

	Language.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	Total 1912-1921.	REMARKS.
1.	English	78	112	125	171	219	187	222	254	193	185	158	1,826	
2.	Arabic	22	19	7	27	14	25	17	30	42	52	58	291	
3.	Bruhi	..	..	..	..	..	6	..	..	..	..	..	6	
4.	Sanskrit	7	6	4	6	10	17	8	5	9	8	13	86	
5.	Persian	15	9	15	22	17	18	11	19	11	15	19	156	
6.	Urdu	691	591	532	964	624	660	565	558	468	649	671	6,282	
7.	Punjabi	504	523	697	704	571	543	550	591	482	715	786	6,162	
8.	Hindi	68	75	52	62	73	70	100	84	76	73	83	748	
9.	Sindhi	18	13	34	25	14	29	15	9	13	5	5	162	
10.	Multani	6	6	2	3	12	2	6	5	7	3	7	53	
11.	Pashto	8	7	13	18	2	2	2	1	..	4	5	54	
12.	Kashmiri	15	7	..	9	1	2	1	3	..	..	1	24	
13.	Lande	..	..	..	..	..	1	..	1	..	1	2	5	
14.	Mandiali (Hill Dialect) ..	..	..	..	..	1	1	..	..	1	..	1	4	
15.	Khowar	..	..	..	..	..	..	..	..	..	..	1	1	
16.	Prakrit	..	..	..	..	..	..	..	1	..	..	..	1	
17.	Bilingual	115	142	145	178	148	164	132	128	90	107	120	1,354	
18.	Trilingual	15	20	15	29	13	19	14	10	10	28	16	174	
19.	Polyglot	3	2	1	3	2	5	3	..	1	3	1	21	
	Total ..	1,565	1,532	1,642	2,221	1,721	1,751	1,646	1,699	1,403	1,848	1,947	17,410	

CHAPTER X.

Infirmities.

SECTION I.—GENERAL.

Section I.—General.

Reference to statistics.

193. As at previous censuses the data regarding only four infirmities were recorded. These were insanity, deaf-mutism, blindness and leprosy. The statistics relating to these infirmities are given in Imperial Tables XII and XII-A and in six Subsidiary Tables.

Imperial Table XII gives the distribution of the various infirmities by age and sex for the Punjab, British Territory, Punjab States and Delhi separately. Unfortunately this table contains some serious errors which were only discovered after the tables had been finally printed, and it has not been possible at this stage to do more than note in the text below some of the corrections which are required.

Imperial Table XII-A gives the distribution of infirmities for castes, tribes or races, and single infirmities only are dealt with.

The information contained in the Subsidiary Tables is as follows :—

Subsidiary Table I gives the number of afflicted persons per 100,000 of the population at each of the last 5 censuses for each district, State and Natural Division.

Subsidiary Table II gives the age-distribution of the infirm per 10,000 infirm persons of each sex for the Punjab and Delhi separately, and for the Punjab and Delhi together for each of the last 5 censuses.

Subsidiary Table III gives the number of afflicted persons for each age-period per 100,000 of each sex, as well as the number of females afflicted per 1,000 males.

Subsidiary Table IV gives the population and number of infirm persons for certain distinctively Hindu, Sikh and Musalman castes.

Subsidiary Table V gives the proportions of infirm persons among Hindus and Musalmans, the difference of these proportions, and the ratio of this difference to its standard error.

Subsidiary Table VI shows the number of persons by sex suffering from single and dual infirmities, and must be taken to replace the legend of Imperial Table XII, and to correct *pro tanto* the contents of that table.

Subsidiary Table VII is a list of certain Albinos in the Punjab, 1923.

Intructions to enumerators.

194. The instruction printed on the cover of the enumeration book was as follows :—

> "Column 16 (Infirmities).—If any person be blind of both eyes, or insane, or suffering from corrosive leprosy, or deaf and dumb, enter the name of the infirmity in this column. Do not enter those who are blind of one eye only, or who are suffering from white leprosy only."

The further instruction contained in Appendix 1 of the supplementary instructions to Supervisors contains the following entry :—

"Column 16.—Care is needed to prevent the entry of persons suffering from leucoderma or white leprosy and other infirmities not falling within the scope of column 16.

Persons blind of one eye should not be entered. Only those totally blind of both eyes should be included. A man must be both *deaf and mute* in order to be included in this column."

These instructions are practically identical with those issued in the censuses of 1901 and 1911 except that with regard to deaf-mutes the enquiry was only restricted to those born deaf and dumb.*

Dual infirmities were recorded ; but, in no instance was any person shown as suffering from triple infirmities. The complete table of single and dual infirmities, so far as it can be reconstructed by the help of the legend on Imperial Table XII, is given in Subsidiary Table VI, and this shows that the number of persons suffering from single and dual infirmities is greater than that shown in the Imperial Table. It is not necessary to discuss here how the error arose.

Variation since 1881.

195. Variation in the number of the infirm per 100,000 of the total population since 1881 is exhibited in the table in the margin. There is probably no significant change in the proportions of these infirmities during the last decade ; but looking to the figures in all 5 censuses together, there seems to be a general tendency for a decrease of recorded infirmities during the last 40 years. Considerations of time prevent the application of the proper statistical criteria for these apparent differences, and without such tests it would be unwise to regard any of the changes as indicative of fundamental improvement.

VARIATION IN THE NUMBER OF THE INFIRM PER 100,000 SINCE 1881.

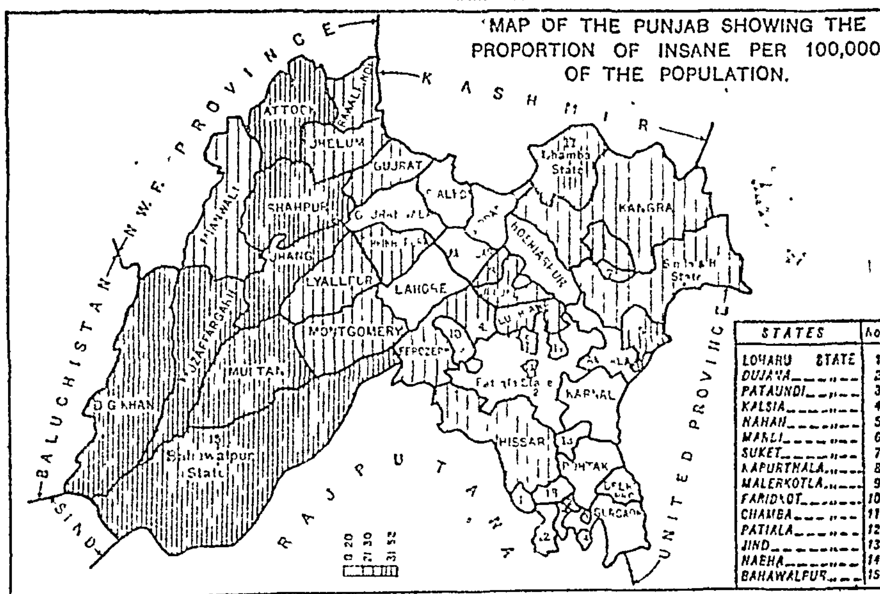
Infirmity.	Punjab Province.					Delhi.
	1921.	1911.	1901.	1891.	1881.	1921.
Total	389	377	439	504	744	190
Insane	28	26	35	29	48	16
Deaf-mutes ..	90	84	80	98	122	33
Blind	260	254	305	351	529	140
Lepers	11	13	19	26	45	2

Insanity.

Local distribution.

196. The local distribution of insanity in the Punjab and Delhi is shown in the diagram below. This shows the frequency of the disease in three groups,

DIAGRAM 55.

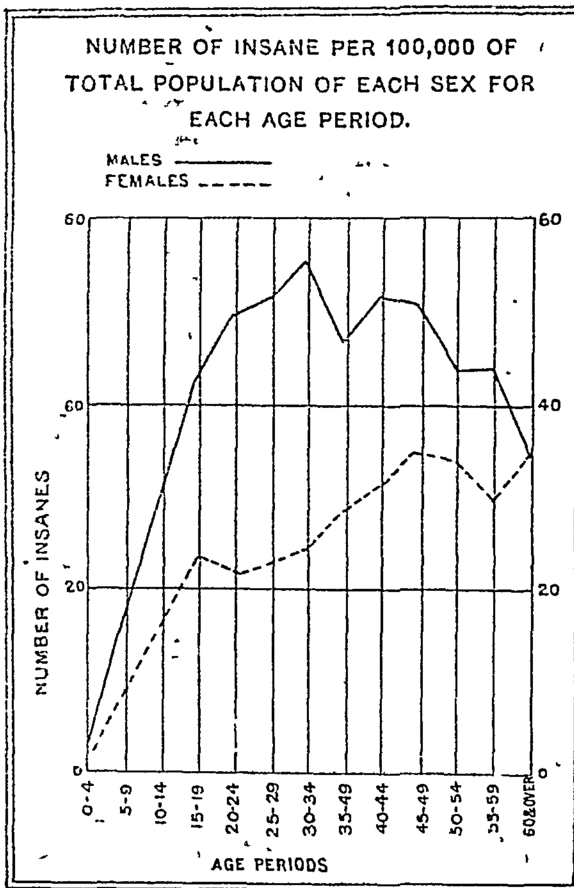


*According to the Rev. Arnold Hill Payne (*vide* article Deaf and Dumb, Encyclopædia Brittanica, Vol. VII, 11th edition), dumbness in the true sense of the word does not exist, and he would attribute all cases of deaf-mutism to congenital deafness which has prevented the sufferer from attempting to speak. The classification of Doctor Edward M. Gallaudet, of deaf-mutes into the speaking-deaf, the semi-speaking-deaf, the mute-deaf, the speaking-semi-deaf, the mute-semi-deaf, the hearing-mute and the hearing-semi-mute, seems more rational although if the Rev. Hill Payne is right, no hearing mutes exist.

namely for those districts in which there are less than 20 insane persons per 100,000 of population, those districts in which there are between 21 and 30 insane persons per 100,000 of population, and lastly those districts containing over 30 insane persons, per 100,000 of population. In the preparation of this diagram the figures of Lahore lunatic asylum have been excluded, as it was not possible to refer all the inmates to their districts of birth. It appears that the Central Punjab is more free from insanity than either the Western or the North-Eastern Punjab. The light thrown on the probable causation of insanity by the variation in local distribution is discussed by Rai Bahadur Pandit Hari Kishen Kaul, in paragraph 498 of the Census Report of 1911, but he has not mentioned in this connection the only predisposing cause which is likely to afford an explanation of the moderate to high frequency of insanity in the hills, to wit the existence of hereditary syphilis, known to be prevalent in those regions. In considering the possible effects of consanguinity on the inheritance of the insane diathesis Pandit Hari Kishen Kaul rightly points out that cousin marriage. cannot be the sole cause as Hindus do not contract such alliances. The problem is further examined in Section II of this chapter in the present report.

Age-distribution. 197. Diagram 56 given in the margin shows the number of insane persons per 100,000 of the total population for each sex of each quinquennial age-period, the figures for which are given in Subsidiary Table III at the end of this chapter. The curve for males shows a steady increase up to 34 years after which there is an irregular decrease. As insanity is not often cured in the Punjab, the age-curve indicates that after the age of 34 mortality among insane males is greater than that among the population at large Amongst females th he most rapid increase ıvi- shown from the ages ‹ 0—19: and there is al),000 somewhat notablc nor the crease among the females which ma each associated with afflicted hardships to men in the firm persons have passed bearing age among Hindus

DIAGRAM 56



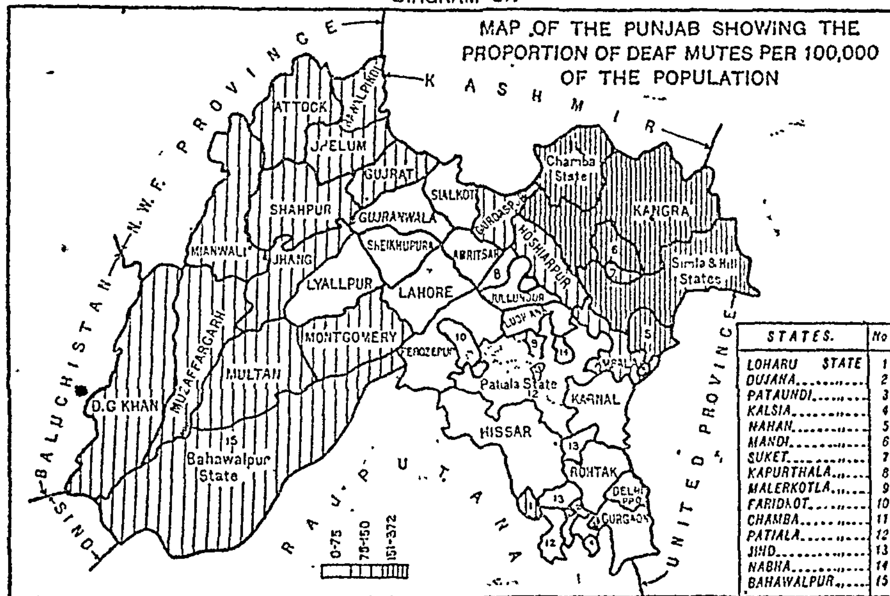
Lahore Lunatic Asylum. 198. The only lunatic asylum in the Province is situated in Df this differ- the figures for inmates both female for the 10 years 19ering from are shown in the margin. of Imperial creasing popularity of the tion rather than any incre3. insanity in the general popk was as is indicated by the figures. It seems probable that the common people do not suffer fools as gladly as they did in the past, and are more ready to hand over their insane relatives to proper medical supervision.

Year.	Males.	Females.	Total.
1912	540	143	683
1913	571	156	727
1914	581	161	742
1915	618	172	790
1916	651	161	812
1917	703	172	875
1918	704	168	872
1919	694	163	857
1920	707	147	854
1921	678	176	854

Deaf-Mutism.

199. The local distribution of deaf-mutism in the Punjab is shown in diagram 57. It is shown in Section II of this chapter that Musalmans suffer from deaf-mutism in a significantly greater degree than Hindus, and this would explain the appearance of a relatively large amount of deaf-mutism in the Western Punjab. The greatest amount of deaf-mutism is, however, shown by the hill States and hill districts of Chamba, Kangra, Simla, Mandi and Nahan where the number of deaf-mutes exceeds 150 per 100,000 of the population. The Central Punjab, as in the case of insanity, appears to be relatively free from this infirmity. **Local distribution.**

DIAGRAM 57.

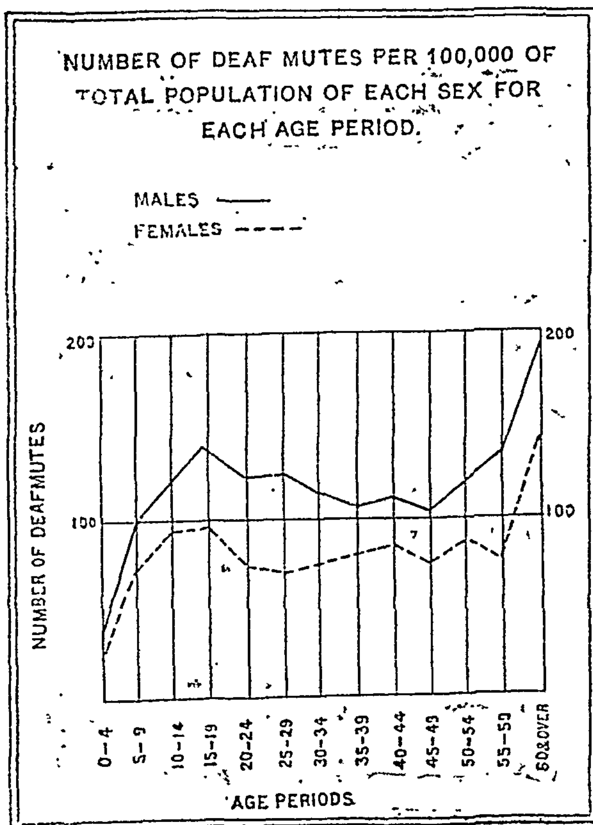


Deaf-mutism has a very wide range varying from 24 persons per 100,000 in Malerkotla to 372 persons per 100,000 in the Kangra district. The proportion of deaf-mutism per 100,000 persons by natural divisions is shown in the margin.

No.	Natural Divisions.	Males.	Females.
1	Himalayan	329	240
2	Sub-Himalayan	114	81
3	North-West Dry Area	107	68
4	Indo-Gangetic Plain	69	41
5	Punjab	106	72

201. Diagram 58 shows the age-distribution for quinquennial periods for males and females separately, the figures being based on those of Subsidiary Table III. **Age-distribution.**

DIAGRAM 58

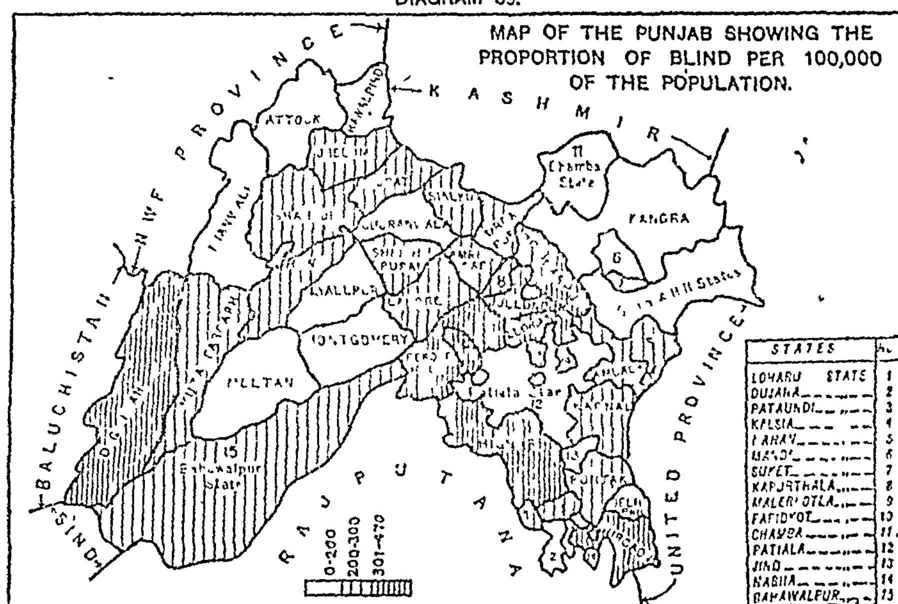


Blindness.

Local distribution.

201. Diagram 59 gives the local distribution of blindness according to

DIAGRAM 59.

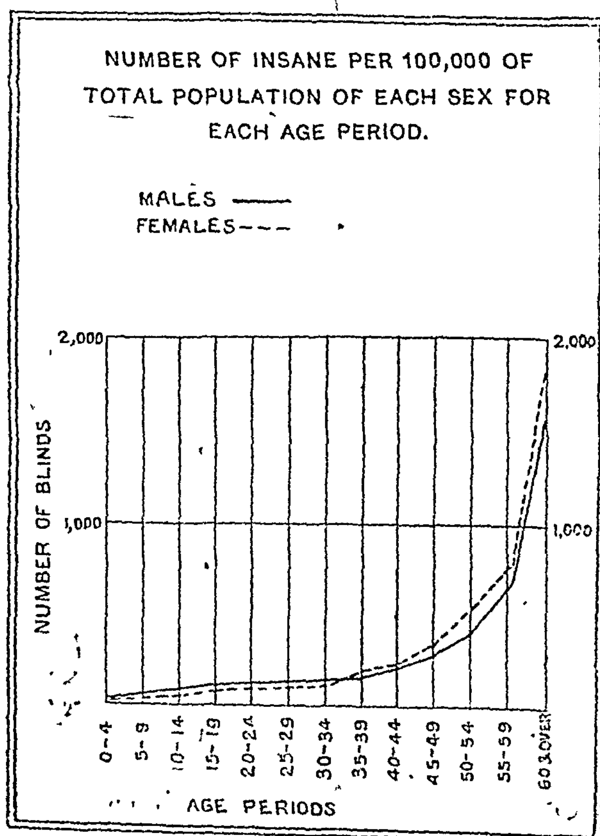


three grades of frequency, per 100,000 of the population, namely, from 0—200, 201—300, 301 and over. The districts and States with the highest proportion of blindness are comprised in a strip starting from the Hoshiarpur district on the North-East and broadening out to Ferozepore and Hissar on the Rajputana border. Besides this strip the districts of Gurgaon and Dera Ghazi Khan have both over 300 blind persons per 100,000 of population. The actual highest figure for blindness is shown by Pataudi (470 per 100,000) and it is followed by Gurgaon (419), Dujana (414), Kalsia (406), Jullundur (392), Ludhiana (381), Hissar (367), Hoshiarpur (342), Faridkot (323), Patiala (322), Dera Ghazi Khan (322) and Ferozepore (319).

Age-distribution.

202. Variation in the proportion of blind from one age-group to another is shown for each sex by quinquennial periods in diagram No. 60 reproduced in the margin. Blindness being essentially a disease of old age, the curves for both males and females rise steadily for the higher age-groups. Only 55 persons, 35 males and 20 females, are recorded as blind for ages below 1 year, and this is evidence of the rarity of congenital blindness.

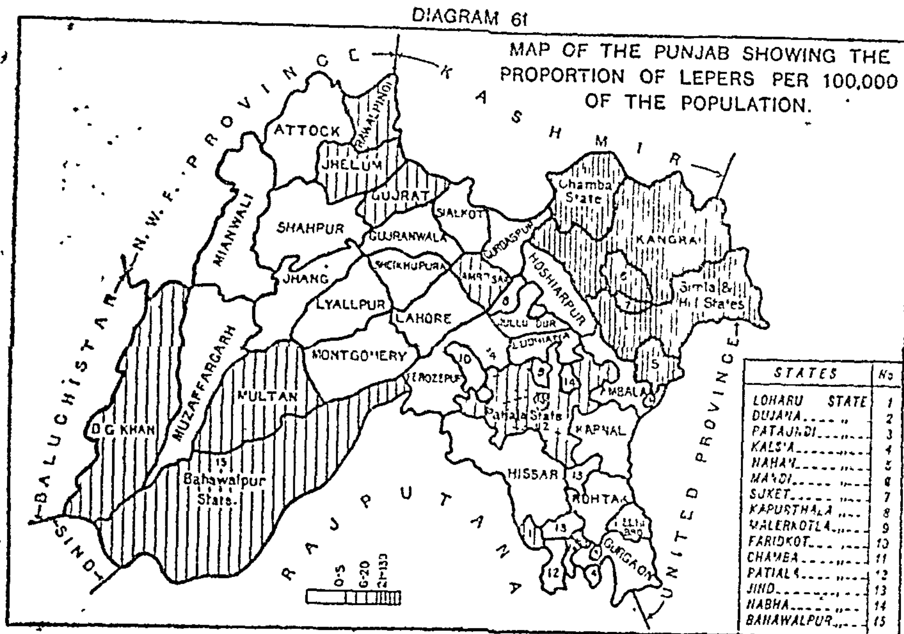
DIAGRAM 60



Leprosy.

203. The local distribution of leprosy according to 3 grades of frequency is shown in diagram 61 printed below, and as in the case of both insanity **Local distribution.**

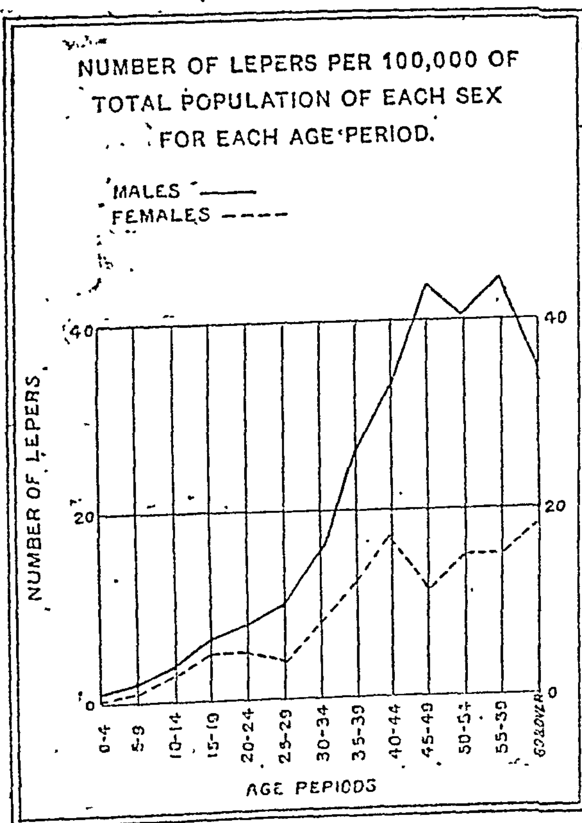
DIAGRAM 61



and deaf-mutism the mountainous region of the Himalayas has a relatively large proportion of infirm persons.

204. Diagram 62, printed in the margin, shows the distribution of leprosy by age in quinquennial age-periods for males and females separately. **Age-distribution.**

DIAGRAM 62



In considering all the diagrams of local distribution of infirmities in the Punjab one ought to bear in mind that there is a tendency to conceal the existence of the infirmities of insanity, deaf-mutism and leprosy, and that therefore it is possible that the apparent rarity of these three infirmities in the Central Punjab is due largely, if not wholly, to the greater sophistication of the Punjabi in the Central Punjab as compared to his brethren in the Himalayan region and in the extreme West. This consideration does not apply to blindness, as sufferers from this infirmity are under no stigma: in fact a large number of blind beggars make their livelihood by a successful appeal to the sympathies of the charitable. Whether the greater frequency of recorded blindness in certain portions of the Punjab can be attributed to the concourse of blind beggars attracted by the benevolence of the inhabitants cannot be positively affirmed, but the possibility should be borne in mind. If this is so the diagram of the distribution of blindness in the Punjab may be indicative of the areas in which reside the pious and the charitable.

Section II.—Consanguinity.

Comparative extent of infirmity among Hindus and Musalmans.

205. It has been already remarked in paragraph 139 of Chapter VII that the Hindu and Musalman communities which differ in no practice of evolutionary import so much as in their observance of out-breeding and in-breeding, offer exceptional opportunities for studying the good and evil results of cousin marriage. The data obtained from the special enquiry into over a thousand marriages among Musalmans in the Punjab show that first-cousin marriages form about 40 per cent. of all Musalman marriages in Attock, 36 per cent. in Muzaffargarh, 23 per cent. in Gurdaspur and in Delhi. Possibly for pure Musalman castes, that is excluding those tribes which are recent converts to Islam, a percentage of about 25 of first-cousin marriages would be found throughout the Punjab.*

If there is any genetic effect of cousin marriage we should expect it to be reflected, it may be ever so dimly, in the relative amount of infirmities among Hindus and Musalmans. Unfortunately infirmities have not been classified by religion, and we can make only an approximate reconstruction from Table XII-A which gives the infirmities by castes, by grouping together the infirm of those castes which consist wholly or almost wholly of Hindus, or Sikhs, or Musalmans. 11 distinctively Hindu castes, 2 Sikh, and 17 distinctively Musalman castes were selected, and the population of each, and the numbers of infirm persons are shown in Subsidiary Table IV. The castes chosen and the percentage of the persons belonging to the particular religion are shown in the margin. The list of castes may be legitimately criticised on the ground that among Musalmans a few castes such as the Meo and Sheikh include converts from Hinduism: and, further, on the ground that by not comparing the figures for infirmity for each district separately we are introducing an error owing to the probable association of infirmity with locality. The latter criticism seems of some weight as the distinctively Musalman castes mostly inhabit the North-West of the Punjab, whilst Hindus are mostly to be found in the South and East, and the difficulty has been only partially met by dealing separately with each Natural Division of the Punjab. With these limitations in mind the proportion of each infirmity among Hindus and Musalmans will be compared.

I.—DISTINCTIVELY HINDU CASTES.

Caste.	Percentage of Hindus in caste.
Ahir	98·5
Arya	100·0
Bania	90·7
Brahman	99·4
Chuhra	92·4
Dagi and Koli	99·4
Ghirath	99·3
Kanet	97·2
Khatri	86·2
Mahajan	95·1
Rathi	100·0

II.—DISTINCTIVELY SIKH CASTES.

Caste.	Percentage of Sikhs in caste
Khalsa	95·3
Ramgarhia	87·2

III.—DISTINCTIVELY MUSALMAN CASTES.

Caste.	Percentage of Musalmans in caste.
Arain	
Awan	100·0
Biloch	100·0
Julaha	90·1
Kashmiri	100·0
Machhi	100·0
Meo	100·0
Mirasi	95·8
Mochi	98·4
Moghal	100·0
Mussalli	100·0
Pathan	100·0
Qassab	100·0
Qureshi	100·0
Sayad	100·0
Sheikh	100·0
Teli	99·4

It is idle to compare the crude figures of infirmity without taking into account the errors due to the smallness of the samples. For instance, in the Himalayan area there are only 147 insane Hindu males and 78 Hindu females as against 16 insane Musalman males and 14 Musalman females, so that by pure chance, say the chance of death, there might have been temporarily fewer Musalman insane than the average, and this would entirely vitiate a direct comparison unless due regard were paid to the errors of random sampling.† If we are comparing the

*There are two sources of error which militate against exact conclusions. Firstly, the 4 districts in which the enquiry was made can hardly be safely treated as representative of the 30 districts in the two Provinces. Secondly, with 1,000 cases there is still an appreciable error due to random sampling even if the 4 districts were representative. If we assume that the true percentage of first cousin-marriage is 25, the second cause gives rise to a standard error of $\sqrt{1000 \times \frac{1}{4} \times \frac{3}{4}} = 13{\cdot}7$ or 1·4 per cent. So far then as random sampling affects the result the percentage of first-cousin marriage among Musalmans can hardly be less than 21 or greater than 29.

†The error of random sampling" is nothing more than an exact measure of the well appreciated fact that small numbers do not afford as good material for generalisation as large ones. If you heard Jones make 2 false statements out of 2, you would not be so sure he was a habitual liar, as if you heard him make 100 false statements out of 100. In reality all differences of the figures from caste to caste, from religion to religion; of the data of one locality with those of another, and of the figures of one census with those of another should be compared with the "error of random sampling." While the comparision is always desirable, it becomes imperative when dealing with the small numbers involved in the Tables relating to imfirmities.

extent of leprosy among Hindus and Musalmans in the Indo-Gangetic Plain, the crude figures are—

	NUMBER OF LEPERS PER MILLION AMONG	
	Hindus.	*Musalmans.*
Males	83	47
Females	15	24

and our first impulse is to conclude that among males, Hindus are more subject to the disease than Musalmans, while among females the reverse is the case. Actually we find on calculation of the standard error of the difference that the conclusion that Hindu males are more often leprous than Musalman males is probably true for the Indo-Gangetic Plain ; but for females there is no significant excess of the disease among Musalmans.

Subsidiary Table V gives in full the figures for the proportions of the infirm among the Hindu and Musalman communities, the difference in the proportions, and the ratio of that difference to its standard error. Wherever that ratio is not at least 3 or over, no significance should be attached to a differential proportion of infirm persons among the two communities. As, apart from the error of random sampling, a difference of the proportionate number of infirm persons may arise from inaccuracies of the record, it will be wise to defer judgment as to the reality of some of the differences which satisfy even the statistical criterion.

Out of 32 cases for the 4 Natural Divisions and 4 infirmities, for males and females, there is a statistically significant difference in 14 cases, and these are noted below :—

Infirmity.	Locality.	Sex.	Worse sufferers.
Insanity	Indo-Gangetic Plain.	Males.	Musalmans.
Deaf-mutism	Indo-Gangetic Plain.	Females.	Musalmans.
	Himalayan Area.	Females.	Musalmans.
	Sub-Himalayan Area.	Males.	Hindus.
	North-West Dry Area.	Males.	Musalmans.
Blindness	Indo-Gangetic Plain.	Males and Females.	Hindus.
	Himalayan Area.	Males.	Hindus.
	Sub-Himalayan Area.	Males and Females.	Hindus.
	North-West Dry Area.	Males.	Hindus.
Leprosy	Indo-Gangetic Plain.	Males.	Hindus.
	Himalayan Area.	Males and Females.	Hindus.

We may provisionally conclude that in the Punjab Hindus suffer more from blindness and leprosy than do Musalmans, but that Musalmans are, on the whole, more liable to deaf-mutism than Hindus. Hindus and Musalmans seem equally liable to insanity, no deduction unfavourable to the latter community being justified from the single instance (out of 8 possible instances) of an excess of Musalman insane among males in the Indo-Gangetic Plain.

So far then as this analysis goes there is nothing to show that consanguineous marriages are productive of an insane, blind, or leprous diathesis, the Hindu community containing as many as, if not more persons infirm from these causes than the Musalman community.

The question of deaf-mutism is discussed in paragraph 207 below.

In relation to the excess of blind Hindus over the number of blind Musalmans it is necessary to recall that blindness is essentially a disease of old age, and that the Hindu community is slightly more long-lived, judging from the crude figures, than the Musalman. The mean age of Hindus at the present census was 25·7 years (males) and 24·1 (females), as against 25·0 (males) and 24·3 (females) for Musalmans : so this may account for a part of the result observed which is unfavourable to Hindus.

206. Deaf-mutism is dealt with separately in its relation to consanguinity because it has been found that its occurrence among the off-spring of related parents is not very different from expectation assuming that deaf-mutism arises from a single pair of recessive Mendelian elements, (*vide* Proc. Roy. Soc. B., Vol. 84, 1911).* For the analysis that follows the proportion of first-cousin marriage **Deaf-mutism.**

*See also Eugenic's Laboratory Publications, Memoir Series IV, "On the measure of the resemblance of first-cousins" by Ethel M. Elderton and Karl Pearson, and Lecture Series IV "On the marriage of first-cousins" by Ethel M. Elderton.

of 25 per cent. has been adopted for all four Natural Divisions of the Punjab, this being the average suggested by the special enquiry described in paragraph 140 of Chapter VII (Civil Condition). This assumption leads by the methods of the paper cited to an estimate of the relative rates of production of deaf-mutism from first-cousin marriages and non-consanguineous marriages respectively among Musalmans; and, as we know the proportion of deaf-mutes among the non-inbreeding Hindu community our results can be tested by comparing it with the amount of deaf-mutism among the off-spring of unrelated Musalman parents.

The results obtained are conveniently exhibited in the following notation:—

Let D_M be the *observed* proportion of deaf-mutes among the Musalman population generally.

Let d_m be the *calculated* proportion of deaf-mutes who are the offspring of non-consanguineous marriages among Musalmans.

Let d'_m be the *calculated* proportion of deaf-mutes who are the offspring of cousin marriages among Musalmans.

Let D_H be the *observed* proportion of deaf-mutes among the Hindu population generally, a population which does not practice consanguineous marriage.

The calculation has been made for each Natural Division and for each sex separately. All results are expressed as so many cases in a million of population.

	Indo-Gangetic Plain.		Himalayan Area.		Sub-Himalayan Area.		North-West Dry Area.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
D_M	774	514	3,608	3,307	964	818	1,137	700
d'_m	1,964	1,417	6,631	6,194	2,338	2,053	2,663	1,813
d_m	377	214	2,600	2,346	506	406	628	329
D_H	710	404	3,060	2,236	1,285	973	756	719
Ratio d'_m / d_m	5·2	6·6	2·6	2·6	4·6	5·1	4·2	5·5

This shows that if deaf-mutism can be regarded as a Mendelian unit character its appearance among the non-inbreeding section of the Musalman community is nearly always less than among Hindus, who never marry their relatives. The only apparent exception is for females in the Himalayan Area, when the difference is far too small to be significant. It is highly desirable to make the whole calculations afresh for such diverse values of the percentage of cousin marriage among Musalmans as would be found from a full enquiry in each of the 4 Natural Divisions. The adoption of an all round figure of 25 per cent. of first-cousin marriage for all Natural Divisions is necessitated by the paucity of the material. The results suggest either—

(1) that Musalmans, apart from the practice of consanguineous marriage, are less liable to deaf-mutism than Hindus, or

(2) that deaf-mutism cannot be associated with only a single pair of allelomorphic Mendelian elements.

Albinism. 207. The condition of Albinism, though it did not form part of the Census enquiry, has been so frequently attributed to consanguinity, of parentage, that it seemed worth while to attempt to discover if it occurs more frequently among Musalmans than Hindus. A report was asked for from all Deputy Commissioners as to the Albinos in their districts, and they were supplied with photographs of two typical Indian Albinos.* Unfortunately the replies showed that many cases of "phulberi" or leucoderma had been included, and all these cases, numbering over 500, have had to be discarded with the exception of 13 cases reported by Col. Forster, Director of Public Health, and two cases reported by my Personal Assistant, one of which I saw myself. The results are tabulated in Subsidiary Table VII. 15 cases (one of which from the description of symptoms of itching and spreading of the white patches given by Dr. Rasul, the District Medical Officer of Health, Rohtak, may be leucoderma) are too few to base sure conclusions on. Of the 15 cases 10 are Musalmans, 5 the children of first-cousin parents, and 5 the children of non-related parents, 5 cases are of Hindus, who are of course not the children of related marriages.

*These were kindly supplied to me by Col. W. H. C. Forster, I. M. S., Director, Public Health, Punjab.

I. Number afflicted per 100,000 of the population at each of the last five censuses. II. Age distribution per 10,000 infirm persons of each sex. III. Number afflicted per 100,000 persons of each age-period and number of females afflicted per 100 males. IV. Showing the population and numbers of infirm for distinctively Hindu, Sikh and Musalman Castes; Population of certain selected castes by natural divisions. V. Showing the proportion of infirmity among Hindus and Musalmans, the difference of these proportions, and the ratios of this difference to its standard error. VI. Showing number of persons by sex suffering from single and dual infirmities. VII. List of certain Albinos in the Punjab 1923.

SUBSIDIARY TABLE I.

Number afflicted per 100,000 of the population at each of the last five censuses.

District or State and Natural Division.	Insane										Deaf-mutes.									
	Males.					*Females.*					*Males.*					*Females.*				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PUNJAB AND DELHI ..	35	31	43	36	58	20	20	26	21	36	105	95	91	115	145	71	70	66	77	95
PUNJAB	35	..	..	..	..	20	..	..	..	..	106	..	..	..	..	72	..	..	..	..
Indo-Gangetic Plain West (Total).	35	31	33	31	43	17	17	17	15	26	69	58	47	74	102	41	38	29	45	63
Indo-Gangetic Plain West (Punjab).	35	..	..	..	..	17	..	..	..	..	70	..	..	..	..	42	..	..	..	..
1. Hissar	27	22	28	34	41	14	15	17	20	33	77	66	74	86	99	47	50	49	55	59
2. *Loharu State* ..	18	20	..	..	40	10	23	..	..	48	183	130	135	82	80	93	116	85	44	32
3. Rohtak	23	26	31	34	45	10	6	13	11	25	57	45	30	67	105	30	25	22	41	68
4. *Dujana State* ..	7	37	40	36	40	8	8	17	16	28	88	157	64	94	112	49	58	26	..	110
5. Gurgaon	19	19	16	18	5	10	10	8	6	3	64	65	71	59	79	40	58	41	40	53
6. *Pataudi State* ..	..	10	35	10	21	12	..	..	22	24	52	79	87	70	147	23	21	38	44	60
7. Karnal	25	26	25	26	47	13	16	17	16	32	43	29	26	66	54	29	15	17	36	28
8. Jullundur	36	31	41	33	50	22	24	23	14	32	81	59	46	84	98	57	38	24	60	77
9. *Kapurthala State* ..	27	28	25	35	47	26	19	16	18	35	64	83	94	102	69	43	68	50	66	50
10. Ludhiana	24	25	29	32	50	19	14	21	15	30	83	58	42	80	135	37	25	31	45	75
11. *Malerkotla State* ..	34	32	72	44	31	12	20	28	26	18	32	49	60	49	70	12	23	42	31	49
12. Ferozepore	31	27	29	34	34	18	19	17	22	20	83	59	41	73	68	46	38	23	46	44
13. *Faridkot State* ..	14	14	14	16	35	6	11	9	6	25	59	43	48	56	82	32	21	49	25	30
14. *Patiala State* ..	25	19	11	19	47	12	11	5	9	29	78	52	39	50	159	48	34	23	27	89
15. *Jind State*	17	19	10	26	48	5	6	2	13	25	54	54	39	67	132	35	36	23	44	66
16. *Nabha State* ..	19	12	17	15	33	8	9	9	7	37	50	67	79	77	112	24	34	58	42	65
17. Lahore	129	102	100	57	47	45	46	48	29	26	77	73	42	102	97	49	45	30	70	62
18. Amritsar ..	19	21	34	20	41	12	13	15	12	19	53	47	37	76	119	30	36	26	37	76
19. Gujranwala	17	20	35	36	55	13	17	19	15	29	69	74	59	86	91	43	45	35	47	59
20. Sheikhupura	29	..	..	..	..	17	..	..	..	..	96	..	..	..	..	44	..	..	..	..
Himalayan	31	21	59	44	74	18	16	38	27	43	329	285	326	379	393	240	226	279	286	266
21. *Nahan State* ..	30	29	61	92	115	61	38	42	66	108	344	216	260	374	408	221	211	239	248	265
22. Simla	13	16	4	25	58	20	14	28	18	46	131	109	153	185	268	135	137	169	163	215
23. *Simla Hill States* ..	33	10	26	27	32	17	7	8	17	15	284	181	229	306	311	235	178	231	253	198
24. *Bilaspur State* ..	10					2					151					92				
25. Kangra	29	26	96	46	84	13	18	64	30	47	437	437	464	477	481	303	311	356	344	350
26. *Mandi State*	34	9	4	34	48	17	3	10	19	14	184	51	48	177	147	122	37	31	93	97
27. *Suket State*	24	7	41	18	41	8	4	4	16	4	112	107	176	137	225	51	62	233	41	198
28. *Chamba State* ..	54	34	42	64	149	25	26	24	17	83	315	258	384	460	518	276	242	375	456	442
Sub-Himalayan ..	27	24	42	34	51	15	17	26	22	33	114	115	86	121	158	81	83	63	83	104
29. Ambala	23	36	62	49	57	13	24	37	30	38	108	125	60	132	161	86	80	39	79	100
30. *Kalsia State*	31	48	89	40	41	36	93	73	74	55	267	281	273	268	271	254	256	215	200	201
31. Hoshiarpur	33	24	42	26	44	12	8	25	11	26	128	115	109	132	174	91	86	82	103	124
32. Gurdaspur	23	19	30	21	38	14	17	19	9	26	108	114	62	114	210	74	72	50	62	136
33. Sialkot	17	14	27	19	29	12	11	16	10	15	92	73	46	70	121	56	55	31	43	78
34. Gujrat	30	20	40	41	62	18	12	29	29	39	107	96	77	121	162	70	65	45	70	90
35. Jhelum	34	31	57	43	67	17	15	32	39	44	140	147	88	143	123	98	99	72	112	83
36. Rawalpindi	26	22	42	44	67	16	23	29	32	50	122	144	150	142	139	96	125	110	122	103
37. Attock	10	34	..	..	..	21	30	..	..	..	107	131	..	..	..	74	96	..	..	..
North-West Dry Area ..	44	41	60	53	114	30	30	40	34	71	107	94	126	116	141	68	66	85	71	84
38. Montgomery ..	33	53	73	59	102	24	31	40	37	55	91	103	158	115	117	57	76	91	67	64
39. Shahpur	34	26	71	36	98	26	24	43	20	73	98	102	151	150	205	72	79	107	94	133
40. Mianwali	44	37	39	..	..	15	17	41	..	..	131	94	142	..	..	79	69	109	..	..
41. Lyallpur	28	25	27	..	..	18	19	16	..	..	71	56	67	..	..	42	36	44	..	..
42. Jhang	63	51	76	55	155	35	36	44	29	85	156	106	155	148	157	98	74	94	78	106
43. Multan	43	47	84	53	119	31	30	58	28	67	102	117	156	106	139	64	84	102	70	77
44. *Bahawalpur State* ..	49	33	37	52	90	43	23	29	37	55	110	65	102	64	126	69	48	62	43	63
45. Muzaffargarh ..	56	61	79	81	118	48	52	49	54	97	138	119	118	167	140	85	75	73	90	89
46. Dera Ghazi Khan ..	62	51	80	40	127	32	29	47	35	79	115	103	133	94	106	70	64	103	50	64
DELHI	18	..	..	..	..	12	..	..	..	..	32	..	..	..	..	32	..	..	..	..
Indo-Gangetic Plain West ..	18	..	..	..	..	12	..	..	..	..	32	..	..	..	..	32	..	..	..	..
1. Delhi	18	..	..	..	..	12	..	..	..	..	32	..	..	..	..	32	..	..	..	..

SUBSIDIARY TABLE I.

Number afflicted per 100,000 of the population at each of the last five censuses—*concluded.*

District or State and Natural Division.	Blind.										Lepers.									
	Males.					*Females.*					*Males.*					*Females.*				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
UNJAB AND DELHI ..	**257**	**249**	**298**	**343**	**506**	**257**	**261**	**314**	**361**	**556**	**14**	**17**	**26**	**37**	**65**	**6**	**8**	**11**	**13**	**22**
UNJAB ..	**259**	..	..	..	..	**259**	..	..	..	..	**15**	..	..	..	..	**6**	..	..	..	..
INDO-GANGETIC PLAIN WEST (TOTAL).	**296**	**288**	**340**	**396**	**579**	**299**	**306**	**349**	**409**	**626**	**7**	**10**	**15**	**22**	**43**	**2**	**4**	**5**	**6**	**13**
INDO-GANGETIC PLAIN WEST (PUNJAB).	**303**	..	..	..	..	**305**	..	..	..	..	**7**	..	..	..	..	**2**	..	..	..	..
1. Hissar ..	370	358	325	452	538	364	439	358	538	653	6	11	16	27	39	2	2	2	6	7
2. *Loharu State* ..	210	130	184	100	345	321	197	156	131	354	37	..	12	27	13	..	..	..	..	..
3. Rohtak ..	247	255	266	308	524	236	269	257	326	664	5	4	10	18	41	1	1	1	5	13
4. *Dujana State* ..	443	448	304	211	359	382	298	274	213	450	30	15	64	36	24	..	..	..	..	..
5. Gurgaon ..	390	373	335	363	456	452	512	416	486	633	7	11	20	43	58	1	3	3	8	11
6. *Pataudi State* ..	460	335	400	271	410	480	458	461	332	336	10	..	..	..	..	..	..	..	..	..
7. Karnal ..	304	290	343	436	666	292	263	351	464	811	6	12	13	23	50	1	6	2	4	8
8. Jullundur ..	377	376	434	520	563	411	404	493	582	618	2	6	20	34	42	1	1	6	10	17
9. *Kapurthala State* ..	302	248	278	435	522	289	276	222	373	491	5	22	16	46	40	1	8	1	10	8
0. Ludhiana ..	395	285	609	641	707	361	318	667	653	784	4	17	15	27	42	1	13	7	10	9
1. *Malerkotla* ..	266	296	601	449	615	210	232	747	337	622	..	..	2	47	16	..	..	..	14	9
12. Ferozepore ..	342	347	396	493	575	302	344	387	501	551	7	6	9	23	41	1	2	4	6	12
13. *Faridkot State* ..	336	275	374	483	618	307	205	367	460	505	2	3	11	17	30	..	..	5	4	9
14. *Patiala State* ..	328	266	198	275	710	315	239	135	218	740	12	14	23	18	59	4	5	6	4	16
15. *Jind State* ..	228	218	145	361	460	217	168	138	326	416	5	3	5	15	23	1	..	2	1	4
16. *Nabha State* ..	275	289	449	378	584	210	218	349	304	633	5	4	10	15	64	..	1	7	3	15
17. Lahore ..	235	263	336	399	561	263	297	354	425	585	3	4	8	7	14	1	1	2	2	3
8. Amritsar ..	270	267	404	358	550	285	309	432	330	455	18	28	26	20	57	8	17	14	10	28
19. Gujranwala ..	185	236	299	360	579	190	235	319	371	572	7	3	6	7	15	3	1	3	4	7
20. Sheikhupura ..	224	..	..	..	..	264	..	..	..	..	3	..	..	..	..	..	..	..	..	..
HIMALAYAN ..	**173**	**128**	**130**	**152**	**223**	**166**	**144**	**154**	**161**	**243**	**110**	**117**	**163**	**209**	**289**	**47**	**50**	**70**	**83**	**102**
21. *Nahan State* ..	230	174	220	302	387	252	272	266	361	375	205	234	306	308	695	58	72	103	93	202
22. Simla ..	98	36	76	103	217	161	116	113	181	202	227	206	298	317	355	229	144	233	242	163
23. *Simla Hill States* ..	136	90	86	156	155	131	108	105	154	127	127	99	161	204	228	56	48	62	84	75
24. *Bilaspur State* ..	67					72					19					4				
25. Kangra ..	198	168	156	132	222	180	177	182	134	258	75	104	133	155	209	28	40	55	58	75
26. *Mandi State* ..	195	52	65	116	177	185	54	41	115	148	149	53	85	222	222	78	22	53	72	90
27. *Suket State* ..	133	117	159	61	123	66	54	171	41	155	105	121	135	65	256	35	19	51	16	52
28. *Chamba State* ..	158	96	111	195	374	158	98	171	272	520	121	171	250	449	621	77	121	145	224	276
SUB-HIMALAYAN ..	**244**	**227**	**298**	**316**	**439**	**240**	**229**	**318**	**338**	**491**	**11**	**14**	**25**	**37**	**70**	**6**	**7**	**10**	**13**	**22**
29. Ambala ..	294	284	360	462	512	290	315	424	535	624	17	19	25	52	75	9	6	4	10	18
30. *Kalsia State* ..	335	236	300	449	493	500	301	308	503	367	12	16	22	29	79	4	..	3	10	29
31. Hoshiarpur ..	339	272	382	396	493	346	281	480	448	584	7	16	32	51	92	1	3	10	13	23
32. Gurdaspur ..	274	279	331	299	504	269	278	318	272	541	7	9	14	25	54	2	2	5	8	16
33. Sialkot ..	212	224	293	282	482	204	213	272	256	478	6	13	19	21	57	4	4	5	8	17
34. Gujrat ..	222	171	296	288	466	232	170	319	317	508	8	13	25	36	90	8	7	16	14	32
35. Jhelum ..	238	221	296	247	329	219	216	305	319	373	17	18	30	28	53	14	12	12	18	22
36. Rawalpindi ..	124	134	128	173	220	106	119	122	180	261	27	26	32	46	68	16	23	18	25	29
37. Attock ..	169	166	..	..	..	162	189	..	..	..	7	4	..	..	..	2	3	..	..	..
NORTH-WEST DRY AREA ..	**214**	**228**	**253**	**304**	**536**	**219**	**247**	**279**	**347**	**615**	**6**	**8**	**9**	**8**	**19**	**3**	**3**	**7**	**4**	**10**
38. Montgomery ..	206	290	355	345	586	190	310	348	321	597	5	4	10	9	8	2	1	7	3	3
39. Shahpur ..	202	213	378	405	607	232	232	439	486	761	3	3	5	10	28	1	3	4	6	14
40. Mianwali ..	167	171	221	..	..	181	201	304	..	..	3	2	4	..	..	3	2	6	..	..
41. Lyallpur ..	205	173	136	..	..	188	182	124	..	..	4	2	4	..	..	..	1	3	..	..
42. Jhang ..	224	221	265	283	584	194	203	233	301	721	4	1	6	6	17	3	2	8	4	8
43. Multan ..	173	237	268	221	488	179	266	267	234	521	10	4	10	7	14	5	3	7	2	9
44. *Bahawalpur State* ..	239	182	202	263	441	225	162	219	324	421	9	5	15	6	17	5	7	11	2	7
45. Muzaffargarh ..	251	289	247	390	545	292	344	306	480	709	7	1	7	15	27	3	4	4	7	15
46. Dera Ghazi Khan ..	278	307	299	278	559	337	369	358	335	704	8	4	16	8	26	3	1	11	6	16
DELHI ..	**135**	..	..	..	..	**136**	..	..	..	..	**3**	..	..	..	..	**1**	..	..	..	..
INDO-GANGETIC PLAIN WEST	**135**	..	..	..	..	**136**	..	..	..	..	**3**	..	..	..	..	**1**	..	..	..	..
1. Delhi ..	135	..	..	..	..	136	..	..	..	..	3	..	..	..	..	1	..	..	..	..

SUBSIDIARY TABLE II.

Age distribution per 10,000 infirm persons of each sex.

PUNJAB AND DELHI.

SUBSIDIARY TABLE II.

Age distribution per 10,000 infirm persons of each sex.

PUNJAB AND DELHI.

Age.	Insane.										Deaf-mutes.									
	Males.					Females.					Males.					Females.				
	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.	1921.	1911.	1901.	1891.	1881.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
0—4 (inclusive)	94	73	181	301	266	157	137	219	375	266	284	323	326	640	499	391	436	409	781	621
5—9 (inclusive)	679	627	816	1,016	993	669	676	876	965	924	1,219	1,463	1,305	1,431	1,268	1,363	1,433	1,475	1,514	1,419
10—14 (inclusive)	1,005	1,051	1,267	1,171	1,181	958	1,046	1,211	1,318	1,311	1,318	1,375	1,437	1,333	1,414	1,369	1,389	1,465	1,351	1,396
15—19 (inclusive)	1,027	1,138	1,190	1,553	1,370	958	1,156	1,311	1,441	1,276	1,092	1,173	1,193	1,441	1,149	1,006	1,181	1,136	1,489	1,104
20—24 (inclusive)	1,099	1,236	1,067	1,200	2,020	892	1,128	957	1,052	1,788	865	1,056	994	995	1,646	812	1,049	918	920	1,477
25—29 (inclusive)	1,207	1,282	1,139	1,222		932	1,010	1,008	1,066		922	1,038	973	957		770	901	910	905	
30—34 (inclusive)	1,201	1,258	1,049	834	1,612	976	1,151	1,043	672	1,418	810	919	890	609	1,286	782	895	914	518	1,234
35—39 (inclusive)	748	747	780	865		744	735	683	920		545	526	569	665		565	545	531	677	
40—44 (inclusive)	853	810	800	458	1,039	976	978	763	343	1,229	576	626	661	321	944	703	642	605	315	952
45—49 (inclusive)	558	511	389	485		626	530	364	686		358	338	359	467		355	324	302	512	
50—54 (inclusive)	580	469	480	216	757	774	594	576	238	810	509	422	409	203	757	549	431	420	149	782
55—59 (inclusive)	254	192	164	344		262	201	187	503		255	148	150	436		176	153	156	412	
60 and over	695	606	675	335	762	1,076	658	799	421	918	1,247	593	734	502	1,037	1,159	621	759	454	1,015

	Blind.										Lepers.									
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
0—4 (inclusive)	187	193	181	306	208	147	164	120	212	176	50	54	65	57	33	95	163	149	99	44
5—9 (inclusive)	398	422	440	444	473	293	310	311	317	334	224	116	138	72	113	257	245	312	199	174
10—14 (inclusive)	432	461	478	453	525	307	306	347	383	376	349	175	298	194	277	446	268	350	405	378
15—19 (inclusive)	420	418	429	595	534	269	312	351	478	410	378	394	336	549	526	595	594	558	752	683
20—24 (inclusive)	366	419	435	523	962	337	332	361	410	766	418	452	452	663	1,467	567	513	655	688	1,370
25—29 (inclusive)	416	470	512	613		351	389	432	554		573	690	791	1,127		540	641	796	1,214	
30—34 (inclusive)	437	496	575	495	997	401	498	546	434	960	822	864	1,132	1,051	2,156	1,122	1,049	1,161	951	1,947
35—39 (inclusive)	393	429	452	682		411	397	413	763		1,001	1,106	872	1,605		1,000	1,142	930	1,533	
40—44 (inclusive)	505	673	719	430	1,218	600	801	778	454	1,300	1,335	1,536	1,628	868	2,265	1,608	1,573	1,302	752	2,115
45—49 (inclusive)	478	518	483	942		492	502	486	1,104		1,165	1,039	1,013	1,391		622	723	670	1,058	
50—54 (inclusive)	867	980	927	478	1,649	1,056	1,094	1,057	463	1,773	1,315	1,420	1,281	589	1,719	1,054	1,189	1,086	511	1,656
55—59 (inclusive)	558	490	504	1,496		566	466	495	1,718		637	537	528	1,031		405	478	139	901	
60 and over	4,543	4,031	3,865	2,543	3,434	4,770	4,429	4,300	2,710	3,905	1,733	1,617	1,466	783	1,444	1,689	1,422	1,592	937	1,603

NOTE.—Figures of 1901 include North-West Frontier Province.

SUBSIDIARY TABLE II.

Age distribution per 10,000 infirm persons of each sex.—*concluded.*

Age.	Punjab.								Delhi.							
	Insane.		*Deaf-mute.*		*Blind.*		*Lepers.*		*Insane.*		*Deaf-mute.*		*Blind.*		*Lepers.*	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0—4 (inclusive)	95	155	285	392	187	148	50	95	..	400	113	298	132	72	..	..
5—9 (inclusive)	682	672	1,224	1,367	399	294	225	258	385	400	450	896	264	107	..	..
10—14 (inclusive)	1,009	955	1,319	1,374	433	307	350	448	577	1,200	1,011	747	396	250	..	..
15—19 (inclusive)	1,030	964	1,091	1,008	421	270	380	597	769	400	1,348	747	343	214	..	..
20—24 (inclusive)	1,098	893	864	811	366	339	420	570	1,154	800	1,011	896	343	143	..	..
25—29 (inclusive)	1,209	938	922	771	415	353	575	543	1,154	400	899	597	475	179	..	..
30—34 (inclusive)	1,209	964	813	786	432	400	820	1,126	577	2,000	335	298	844	500	1,250	..
35—39 (inclusive)	741	743	541	567	394	411	1,005	990	1,346	800	1,124	298	369	357	..	3,333
40—44 (inclusive)	841	969	573	607	502	602	1,335	1,601	1,923	1,600	1,236	1,343	818	500	1,250	3,333
45—49 (inclusive)	519	628	358	356	477	493	1,165	624	1,346	400	225	298	528	357	1,250	..
50—54 (inclusive)	582	774	508	546	862	1,050	1,310	1,045	385	800	674	896	1,346	1,714	2,500	3,334
55—59 (inclusive)	257	268	256	176	559	563	635	407	..	..	113	298	554	857	1,250	..
60 and over	698	1,079	1,246	1,149	4,552	4,770	1,730	1,696	384	800	1,461	2,388	3,588	4,750	2,500	..

SUBSIDIARY TABLE II.

Age distribution per 10,000 infirm persons of each sex.—*concluded.*

SUBSIDIARY TABLE III.

Number afflicted per 100,000 persons of each age period and number of females afflicted per 1,000 males.

Age.	Number afflicted per 100,000 of total population of each sex for each age period.								Number of females afflicted per 1,000 males.			
	Insane.		*Deaf-mutes.*		*Blind.*		*Lepers.*					
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Insane.	Deaf-mute.	Blind.	Lepers.
1	2	3	4	5	6	7	8	9	10	11	12	13
PUNJAB.												
ALL AGES	35	20	106	72	259	259	15	6	469	557	826	368
0—4 (inclusive)	3	2	24	19	38	26	1	..	761	767	653	700
5—9 (inclusive)	16	9	89	64	71	50	2	1	462	622	609	422
10—14 (inclusive)	29	17	115	89	92	72	4	3	434	580	587	471
15—19 (inclusive)	43	24	136	92	128	89	7	5	439	515	530	579
20—24 (inclusive)	50	22	120	73	123	110	8	5	381	523	765	500
25—29 (inclusive)	52	23	119	68	131	112	10	4	364	466	703	348
30—34 (inclusive)	56	25	115	73	149	134	16	9	374	539	765	506
35—39 (inclusive)	47	29	105	80	186	208	27	13	469	584	863	363
40—44 (inclusive)	52	32	108	84	230	260	34	17	539	679	989	442
45—49 (inclusive)	51	35	100	72	324	362	44	11	536	553	854	197
50—54 (inclusive)	44	34	117	86	482	596	41	15	623	599	1,006	294
55—59 (inclusive)	44	30	133	73	709	841	45	15	484	382	833	236
60 and over	35	35	192	133	1,706	1,991	36	18	724	514	866	361
DELHI.												
ALL AGES	18	12	32	32	135	136	3	1	481	753	739	375
0—4 (inclusive)	..	3	3	7	17	7	..	..	1,000	2,000	400	..
5—9 (inclusive)	6	4	13	21	32	11	..	..	500	1,500	300	..
10—14 (inclusive)	11	15	32	25	53	35	..	..	1,000	556	467	..
15—19 (inclusive)	15	5	44	26	47	31	..	..	250	417	462	..
20—24 (inclusive)	19	9	28	27	41	18	..	..	333	667	308	..
25—29 (inclusive)	20	5	27	21	61	26	..	..	167	500	278	..
30—34 (inclusive)	11	29	11	12	121	81	4	..	1,667	667	437	..
35—39 (inclusive)	41	19	59	19	82	96	..	10	286	200	714	1,000
40—44 (inclusive)	52	32	58	71	162	11	5	8	400	818	452	1,000
45—49 (inclusive)	67	15	19	31	193	154	10	..	143	1,000	500	..
50—54 (inclusive)	15	21	44	62	375	499	15	10	1,000	1,000	941	500
55—59 (inclusive)	..	..	23	66	475	79	23	..	..	2,000	1,143	..
60 and over	16	22	105	175	1,100	1,454	16	..	1,000	1,231	978	..

SUBSIDIARY TABLE IV.

Showing the population and numbers of infirm for distinctively Hindu, Sikh and Musalman castes.

POPULATION OF CERTAIN SELECTED CASTES BY NATURAL DIVISIONS.

No.	Castes.	Indo-Gangetic Plain West.		Himalayan.		Sub-Himalayan.		N.-W. Dry Area.		Punjab (Total.)	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	1	2	3	4	5	6	7	8	9	10	11
1	Ahir	109,370	87,355	328	92	2,061	1,090	1,388	848	113,147	89,385
2	Arya	3,483	2,424	231	233	20,595	18,081	3,366	2,471	27,675	23,209
3	Bania	182,512	153,299	1,700	1,042	18,236	14,340	1,877	1,163	204,325	169,844
4	Brahman	291,589	227,083	116,371	106,470	113,150	95,484	27,868	19,484	548,978	448,521
5	Chuhra	326,921	275,464	2,836	1,753	38,675	31,093	40,671	32,274	409,103	340,584
6	Dagi and Koli ..	5,435	4,623	78,911	74,737	776	651	13	18	85,135	80,029
7	Ghirath	636	131	61,585	57,728	8,985	7,995	33	23	71,239	65,877
8	Kanet	146	151	146,422	137,381	2,187	1,872	..	..	148,755	139,404
9	Khatri	113,850	89,560	8,521	6,290	83,094	72,596	45,143	36,850	250,608	205,296
10	Mahajan	5,301	4,899	2,129	2,014	11,059	10,548	37	16	18,526	17,477
11	Rathi	..	..	59,795	58,220	8	8	15	35	59,818	58,263
	Total ..	1,039,243	844,989	478,829	445,960	298,826	253,758	120,411	93,182	1,937,309	1,637,889
1	Khalsa	3,910	2,565	51	36	1,487	1,244	93	53	5,541	3,898
2	Ramgarhia	25,878	23,043	397	93	14,731	13,638	125	28	41,131	36,802
	Total ..	29,788	25,608	448	129	16,218	14,882	218	81	46,672	40,700
1	Arain	313,290	257,655	1,168	959	112,934	91,048	169,774	143,781	597,166	493,443
2	Awan	14,375	11,013	19	7	159,472	147,614	57,040	50,590	230,906	209,224
3	Biloch	10,750	9,554	6	1	2,333	2,251	276,848	229,638	289,937	241,444
4	Julaha	121,992	100,747	26,134	23,282	101,260	87,244	101,316	84,900	350,702	296,173
5	Kashmiri	33,990	26,788	1,972	1,242	51,066	47,871	3,965	2,787	90,993	78,688
6	Machhi	68,751	58,438	104	41	16,499	14,983	65,700	54,756	151,054	128,218
7	Meo	61,637	51,884	..	..	204	123	255	242	62,096	52,249
8	Mirasi	51,704	44,427	3,565	2,488	24,589	23,754	46,361	40,133	126,219	110,802
9	Mochi	79,359	66,129	233	205	69,212	61,702	85,864	71,958	234,668	199,994
10	Moghal	12,908	10,650	632	355	29,045	27,223	4,580	3,558	47,165	41,786
11	Mussalli	16,775	14,182	18	16	38,202	33,858	138,833	119,214	193,828	167,270
12	Pathan	40,027	30,362	3,586	1,553	43,329	38,376	60,417	49,525	147,359	119,816
13	Qassab	29,585	26,752	330	176	7,584	7,152	27,162	23,491	64,661	57,571
14	Qureshi	10,502	8,202	146	84	18,187	17,260	23,135	20,109	51,970	45,655
15	Sayad	39,959	33,713	612	441	45,736	43,330	46,351	39,437	132,658	116,921
16	Sheikh	89,374	70,069	4,855	2,757	34,858	26,851	15,827	12,380	144,914	112,057
17	Teli	109,979	91,008	4,293	3,592	43,520	37,099	13,178	10,035	170,970	141,734
	Total ..	1,104,957	911,573	47,673	37,199	798,030	707,739	1,136,606	956,534	3,087,266	2,613,045

SUBSIDIARY TABLE IV.

Showing the population and numbers of infirm for distinctively Hindu, Sikh, and Musalman castes.—*continued.*

No.	Caste.	Indo-Gangetic Plain West.		Himalayan.		Sub-Himalayan.		N.W. Dry Area.		Total Punjab.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	1	2	3	4	5	6	7	8	9	10	11
	INSANE.										
1	Ahir	16	6	..	..	2	..	..	..	18	6
2	Arya	..	..	..	..	3	5	..	..	3	5
3	Bania	58	19	1	..	5	5	1	3	65	27
4	Brahman	131	39	33	14	50	19	11	6	225	78
5	Chuhra	61	38	..	..	15	3	3	6	79	47
6	Dagi and Koli	1	2	22	17	..	..	..	..	23	19
7	Ghirath	..	..	30	5	2	1	..	..	32	6
8	Kanet	..	..	39	37	..	..	..	..	39	37
9	Khatri	70	75	3	..	32	9	22	8	127	92
10	Mahajan	..	..	4	..	1	2	..	..	5	2
11	Rathi	1	..	15	5	1	..	5	..	22	5
	Total	338	179	147	78	111	44	42	23	638	324
1	Khalsa	1	2	..	..	2	..	4	1	7	3
2	Ramgarhia	6	2	..	..	5	..	..	..	11	2
	Total	7	4	..	..	7	..	4	1	18	5
1	Arain	105	50	..	..	37	13	79	45	221	108
2	Awan	2	2	..	..	59	25	20	7	81	34
3	Biloch	8	..	..	..	2	1	148	74	158	75
4	Julaha	57	14	9	8	50	18	57	26	173	66
5	Kashmiri	5	17	3	3	11	8	..	..	19	28
6	Machhi	18	9	..	..	1	..	29	16	48	25
7	Meo	12	3	..	..	..	..	..	..	12	3
8	Mirasi	11	5	1	..	5	4	22	21	39	30
9	Mochi	33	8	..	..	17	13	58	23	108	44
10	Moghal	6	1	..	..	3	1	..	1	9	3
11	Mussalli	3	9	..	..	1	3	32	37	36	49
12	Pathan	58	6	..	..	32	14	18	8	108	28
13	Qassab	7	8	..	..	..	2	14	10	21	20
14	Qureshi	7	2	..	..	5	1	12	3	24	6
15	Sayad	85	8	..	..	12	2	28	19	125	29
16	Sheikh	36	14	2	2	14	4	..	..	52	20
17	Teli	22	17	1	1	11	7	5	1	39	26
	Total	475	172	16	14	260	116	522	291	1,273	584
	DEAF-MUTES.										
1	Ahir	83	26	..	..	5	1	..	4	88	31
2	Arya	1	..	..	..	26	27	..	3	27	30
3	Bania	158	75	2	..	22	16	6	..	188	91
4	Brahman	197	81	329	164	153	111	19	10	698	366
5	Chuhra	207	105	5	1	57	32	19	15	288	153
6	Dagi and Koli	19	11	349	292	..	..	..	..	368	303
7	Ghirath	1	..	268	177	15	9	..	..	284	186
8	Kanet	..	..	392	270	15	7	..	..	407	277
9	Khatri	72	43	16	9	83	43	47	31	218	126
10	Mahajan	..	..	1	1	7	1	..	..	8	2
11	Rathi	..	..	103	83	1	..	..	4	104	87
	Total	738	341	1,465	997	384	247	91	67	2,678	1,652
1	Khalsa	8	2	..	..	13	1	9	3	30	6
2	Ramgarhia	12	1	..	..	8	1	2	..	22	2
	Total	20	3	..	..	21	2	11	3	52	8
1	Arain	290	149	2	6	103	65	161	104	556	324
2	Awan	11	7	..	..	154	100	46	31	211	138
3	Biloch	8	3	..	..	..	6	338	168	346	177
4	Julaha	92	33	119	78	136	93	138	73	485	277
5	Kashmiri	25	6	7	6	25	37	..	..	57	49
6	Machhi	68	33	..	..	5	2	92	40	165	75
7	Meo	18	23	..	..	..	..	..	..	18	23
8	Mirasi	35	34	2	4	32	28	60	24	129	90
9	Mochi	50	25	5	..	48	54	117	58	220	137
10	Moghal	6	7	1	2	38	9	1	..	46	18
11	Mussalli	16	13	..	..	42	32	129	70	187	115
12	Pathan	23	12	5	..	52	42	49	27	129	81
13	Qassab	23	17	..	..	2	3	42	18	67	38
14	Qureshi	6	1	..	..	19	12	32	17	57	30
15	Sayad	35	23	..	..	41	28	61	26	137	77
16	Sheikh	80	40	3	7	21	20	10	7	114	74
17	Teli	69	43	28	20	51	48	16	7	164	118
	Total	855	469	172	123	769	579	1,292	670	3,088	1,841

SUBSIDIARY TABLE IV—*concluded.*

Showing the population and numbers of infirm for distinctively Hindu, Sikh and Musalman castes.—*concluded.*

No.	Caste.	Indo-Gangetic Plain West.		Himalayan.		Sub-Himalayan.		N. W. Dry Area.		Total Punjab.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	1	2	3	4	5	6	7	8	9	10	11
	BLIND.										
1	Ahir	307	289	..	..	2	2	14	6	323	297
2	Arya	4	4	..	..	114	98	2	..	120	102
3	Bania	551	450	3	..	23	19	13	..	590	469
4	Brahman	910	799	205	183	388	264	75	45	1,578	1,291
5	Chuhra	1,630	1,483	3	3	198	191	144	108	1,975	1,785
6	Dagi and Koli	39	35	160	159	..	4	..	..	199	198
7	Ghirath	..	..	125	98	16	15	..	..	141	113
8	Kanet	..	1	327	343	7	8	..	..	334	352
9	Khatri	250	142	11	1	126	125	105	82	492	350
10	Mahajan	1	..	2	1	13	6	..	..	16	7
11	Rathi	..	..	96	60	5	9	..	10	101	79
	Total ..	3,692	3,203	932	848	892	741	353	251	5,869	5,043
1	Khalsa	27	25	..	..	6	14	32	12	65	51
2	Ramgarhia	67	49	..	..	38	27	2	..	107	76
	Total ..	94	74	..	..	44	41	34	12	172	127
1	Arain	707	560	2	..	247	199	286	273	1,242	1,032
2	Awan	42	26	..	..	312	203	77	90	431	319
3	Biloch	34	20	..	..	2	12	661	658	697	690
4	Julaha	412	379	39	47	303	225	263	235	1,017	886
5	Kashmiri	49	45	3	1	32	35	7	5	91	86
6	Machhi	183	213	..	..	12	6	176	204	371	423
7	Meo	175	171	..	..	..	..	..	..	175	171
8	Mirasi	197	176	1	..	77	67	114	132	389	375
9	Mochi	204	201	..	..	122	143	221	186	547	530
10	Moghal	23	18	..	1	37	38	5	8	65	65
11	Mussalli	44	62	..	..	60	69	357	296	461	427
12	Pathan	91	74	4	..	105	174	119	86	319	334
13	Qassab	88	81	..	1	4	11	69	73	161	166
14	Qureshi	17	7	..	..	28	20	42	41	87	68
15	Sayad	85	104	..	..	77	54	93	65	255	223
16	Sheikh	204	154	2	3	52	35	19	28	277	220
17	Teli	294	248	6	2	88	94	20	19	408	363
	Total ..	2,849	2,539	57	55	1,558	1,885	2,529	2,399	6,993	6,378
	LEPERS.										
1	Ahir	11	..	..	..	..	..	..	..	11	..
2	Arya	..	..	..	..	4	3	..	..	4	3
3	Bania	12	2	1	..	1	..	1	..	15	2
4	Brahman	29	5	72	32	18	9	..	1	119	47
5	Chuhra	7	1	3	..	2	3	1	..	13	4
6	Dagi and Koli	16	3	151	72	..	..	..	..	167	75
7	Ghirath	3	1	56	12	..	..	..	..	59	13
8	Kanet	..	..	324	120	..	..	..	..	324	120
9	Khatri	8	1	2	3	14	10	2	..	26	14
10	Mahajan	..	..	..	1	..	..	..	..	..	1
11	Rathi	..	..	77	30	..	..	..	..	77	30
	Total ..	86	13	686	270	39	25	4	1	815	309
1	Khalsa	1	..	..	..	3	..	..	..	4	..
2	Ramgarhia	..	1	..	..	1	..	..	..	1	1
	Total ..	1	1	..	..	4	..	..	..	5	1
1	Arain	4	3	..	..	6	1	8	4	13	8
2	Awan	1	..	..	..	19	7	4	2	24	9
3	Biloch	..	..	..	..	..	..	18	8	18	8
4	Julaha	7	5	9	4	8	5	5	1	29	15
5	Kashmiri	1	..	1	1	4	2	1	..	7	3
6	Machhi	8	3	..	..	1	..	7	2	16	5
7	Meo	3	2	..	..	..	..	..	..	3	2
8	Mirasi	4	2	8	..	8	1	2	..	22	3
9	Mochi	1	..	1	..	3	3	9	2	14	5
10	Moghal	1	..	..	..	3	..	..	..	4	..
11	Mussalli	1	..	..	..	1	3	4	2	6	5
12	Pathan	4	1	1	..	6	5	2	2	13	8
13	Qassab	1	..	..	..	..	..	5	1	6	1
14	Qureshi	..	..	..	..	1	1	..	..	1	1
15	Sayad	5	1	..	..	1	5	4	..	10	6
16	Sheikh	6	3	1	..	2	6	..	..	9	9
17	Teli	5	2	1	..	3	1	2	..	11	3
	Total ..	52	22	22	5	66	40	71	24	211	91

SUBSIDIARY TABLE V.

Showing the proportion of infirmity among Hindus and Musalmans, the difference of these proportions, and the ratio of this difference to its standard error.

Natural Division	Infirmity.	Proportion of Infirmity. Hindus.	Proportion of Infirmity. Musalmans.	Difference of the proportions Δ.	Standard error of difference σ_Δ	Ratio of col. 4 to col. 5. Δ/σ_Δ
	1	2	3	4	5	6
INDO-GANGETIC PLAIN WEST.	**Males.**					
	Insanity	$3·25\times10^{-4}$	$4·30\times10^{-4}$	$1·05\times10^{-4}$	$2·66\times10^{-5}$	3·95
	Deaf-mutism	$7·10\times10^{-4}$	$7·74\times10^{-4}$	$6·4\times10^{-5}$	$3·73\times10^{-5}$	1·72
	Blindness	$3·55\times10^{-3}$	$2·58\times10^{-3}$	$9·7\times10^{-4}$	$7·55\times10^{-5}$	12·85
	Leprosy	$8·3\times10^{-5}$	$4·7\times10^{-5}$	$3·6\times10^{-5}$	$1·1\times10^{-5}$	3·3
	Females.					
	Insanity	$2·12\times10^{-4}$	$1·90\times10^{-4}$	$2·2\times10^{-5}$	$2·14\times10^{-5}$	1·03
	Deaf-mutism	$4·04\times10^{-4}$	$5·14\times10^{-4}$	$1·1\times10^{-4}$	$3·24\times10^{-5}$	3·4
	Blindness	$3·79\times10^{-3}$	$2·79\times10^{-3}$	$1·0\times10^{-3}$	$8·63\times10^{-5}$	11·6
	Leprosy	$1·5\times10^{-5}$	$2·4\times10^{-5}$	$0·9\times10^{-5}$	$0·67\times10^{-5}$	1·34
HIMALAYAN.	**Males.**					
	Insanity	$3·07\times10^{-4}$	$3·36\times10^{-4}$	$2·9\times10^{-5}$	$8·451\times10^{-5}$	0·34
	Deaf-mutism	$3·06\times10^{-3}$	$3·61\times10^{-3}$	$5·5\times10^{-4}$	$2·68\times10^{-4}$	2·1
	Blindness	$1·95\times10^{-3}$	$1·20\times10^{-3}$	$7·5\times10^{-4}$	$2·08\times10^{-4}$	3·1
	Leprosy	$14·33\times10^{-4}$	$4·61\times10^{-4}$	$9·72\times10^{-4}$	$1·761\times10^{-4}$	5·5
	Females.					
	Insanity	$1·75\times10^{-4}$	$3·76\times10^{-4}$	$2·01\times10^{-4}$	$0·745\times10^{-4}$	2·7
	Deaf-mutism	$2·24\times10^{-3}$	$3·31\times10^{-3}$	$1·07\times10^{-3}$	$2·6\times10^{-4}$	4·1
	Blindness	$1·90\times10^{-3}$	$1·48\times10^{-3}$	$4·2\times10^{-4}$	$2·33\times10^{-4}$	1·8
	Leprosy	$6·05\times10^{-4}$	$1·34\times10^{-4}$	$4·71\times10^{-4}$	$1·29\times10^{-4}$	3·7
SUB-HIMALAYAN.	**Males.**					
	Insanity	$3·72\times10^{-4}$	$3·26\times10^{-4}$	$4·6\times10^{-5}$	$3·94\times10^{-5}$	1·2
	Deaf-mutism	$1·29\times10^{-3}$	$0·96\times10^{-3}$	$3·3\times10^{-4}$	$0·695\times10^{-4}$	4·7
	Blindness	$2·99\times10^{-3}$	$1·95\times10^{-3}$	$1·04\times10^{-3}$	$0·101\times10^{-3}$	10·3
	Leprosy	$1·31\times10^{-4}$	$0·83\times10^{-4}$	$4·8\times10^{-5}$	$2·1\times10^{-5}$	2·3
	Females.					
	Insanity	$1·73\times10^{-4}$	$1·64\times10^{-4}$	$0·9\times10^{-5}$	$2·985\times10^{-5}$	0·3
	Deaf-mutism	$9·73\times10^{-4}$	$8·18\times10^{-4}$	$1·55\times10^{-4}$	$0·678\times10^{-4}$	2·3
	Blindness	$2·92\times10^{-3}$	$1·96\times10^{-3}$	$9·6\times10^{-4}$	$1·09\times10^{-4}$	8·8
	Leprosy	$9·9\times10^{-5}$	$5·7\times10^{-5}$	$4·2\times10^{-5}$	$1·90\times10^{-5}$	2·2
N.-W. DRY AREA.	**Males.**					
	Insanity	$3·49\times10^{-4}$	$4·59\times10^{-4}$	$1·1\times10^{-4}$	$0·64\times10^{-4}$	1·7
	Deaf-mutism	$0·76\times10^{-3}$	$1·14\times10^{-3}$	$3·8\times10^{-4}$	$1·005\times10^{-4}$	3·8
	Blindness	$2·93\times10^{-3}$	$2·23\times10^{-3}$	$7·0\times10^{-4}$	$1·45\times10^{-4}$	4·8
	Leprosy	$3·3\times10^{-5}$	$6·2\times10^{-5}$	$2·9\times10^{-5}$	$2·34\times10^{-5}$	1·2
	Females.					
	Insanity	$2·47\times10^{-4}$	$3·04\times10^{-4}$	$5·7\times10^{-5}$	$5·94\times10^{-5}$	0·96
	Deaf-mutism	$7·19\times10^{-4}$	$7·00\times10^{-4}$	$1·9\times10^{-5}$	$9·09\times10^{-5}$	0·21
	Blindness	$2·69\times10^{-3}$	$2·51\times10^{-3}$	$1·8\times10^{-4}$	$1·72\times10^{-4}$	1·05
	Leprosy	$1·1\times10^{-5}$	$2·5\times10^{-5}$	$1·4\times10^{-5}$	$1·67\times10^{-5}$	0·84

SUBSIDIARY TABLE VI.

Showing number of persons by sex suffering from single and dual infirmities.

1. PUNJAB.

	Persons.					Males.					Females.				
	Insane.	Deaf-mutes	Blind.	Lepers.	Total.	Insane.	Deaf-mutes.	Blind.	Lepers.	Total.	Insane.	Deaf-mutes.	Blind.	Lepers.	Total.
Insane	**6,994**	274	115	20	7,403	**4,776**	174	66	10	5,026	**2,218**	100	49	10	2,377
Deaf-mutes ..	274	**22,361**	246	46	22,927	174	**14,351**	160	43	14,728	100	**8,010**	86	3	8,199
Blind	115	246	**64,852**	26	65,239	66	160	**35,485**	16	35,727	49	86	**29,367**	10	29,512
Lepers	20	46	26	**2,699**	2,791	10	43	16	**1,979**	2,048	10	3	10	**720**	743
Total ..	7,403	22,927	65,239	2,791	98,360	5,026	14,728	35,727	2,048	57,529	2,377	8,199	29,512	743	40,831

Note.—Figures in bold type are for single infirmities.

SUBSIDIARY TABLE VII.

List of certain Albinos in the Punjab 1923.

Name.	Father's Name.	District.	Caste.	Age.	Relationship of Albinos parents.	Other Albinos in family.	Reporter.
1	2	3	4	5	6	7	8
Mohammed Ramzan.* ..	Ghulam Rasul	Amritsar ..	Kashmiri (Sheikh.) ..	44	None ..	2 brothers (a), 1 sister (A)	D. P. H.
Mohammed Jamil*	Abdullah ..	Do. ..	Kashmiri ..	18	Do. ..	1 brother (a), mother (A) ..	"
Mst. Jan Bibi ..	Bhola ..	Sialkot ..	Mashaki ..	25	Do. ..	1 brother (A), 2 sisters (a) 1 grand father (A).	"
Mohsan Ali ..	Bagah Shah ..	Do. ..	Sayad ..	50	1st cousins	2 brothers (A), 1 sister (A) father (A).	"
Talah Hussain ..	Abdullah Shah	Do. ..	Do. ..	23	Do. ..	3 brothers (a), 2 sisters (a)	
Salig Ram* ..	Kishen Das ..	Rohtak ..	Khatri ..	48	None ..	No brothers or sisters ..	Leucoderma.
Chandu Lal* ..	Mussadi Lal ..	Do. ..	Mahajan ..	69	Do. ..	3 brothers (a), 2 sisters (a)	"
Mohammad Shafi*	Raunak Ali ..	Do. ..	Sheikh ..	35	Do. ..	5 brothers (a) ..	"
Gama ..	Roshan ..	Ludhiana ..	Faqir ..	13	1st cousins	2 brothers (a + A), 1 sister (A).	"
Hashmat Ullah ..	Nasurullah ..	Do. ..	Pathan ..	28	Do. ..	1 brother (A), 1 sister (A) ..	"
Sundar Singh ..	Tara Singh ..	Amballa ..	Jat Sikh ..	15	None ..	No brothers or sisters ..	"
Baggo ..	Wazira ..	Ludhiana ..	Rajput ..	40	Do. ..	3 brothers (A + 2 a) ..	"
Parshottam Das ..	Dwarka Das	Multan ..	Babra ..	33	Do. ..	3 sisters (a) ..	"
Mohammad Hussain	Mehdi Hassan	Delhi ..	Sayad ..	17	Do. ..	None ..	P. A. (seen by me).
Amanullah Khan ..	Nasrullah Khan	Meerut ..	Pathan ..	27	1st cousins	1 brother (A), 1 sister (A)	"

Note—In column 7 entries should be interpreted thus :—3 brothers (A + 2a) means that the Albino has 3 brothers one of whom is an Albino and the other 2 are not Albinos.

CHAPTER XI.

Caste, Tribe, Race or Nationality.

208. Reference to statistics. 209. Census Instructions. 210. Claims for alterations in classification 211. Classification of castes and modern disintegrating tendencies. 212. Chief Hindu, Musalman and Sikh Castes. 213. Classification of castes according to their traditional occupations. 214. Variations since 1911. 215. Europeans and Anglo-Indians.

208. The statistics relating to caste, tribe, race and nationality are to be found in six of the Imperial Tables. The chief of these is Table XIII, which shows by sex and religion, the number in each caste for each district and State of the Punjab and Delhi. The other tables are— *Reference to statistics.*

Table IX which gives the education by selected castes, tribes or races for 4 main divisions of the Punjab separately, namely, the Eastern Punjab, Central Punjab Hills, Central Punjab Plains, and Western Punjab. The table distinguishes Hindus, Musalmans, and Sikhs in each caste in which there are many representatives of each religion.

Table XII-A gives the Infirmities by selected castes, but unlike Table IX does not distinguish the religious groups. The data for infirmities for selected religions was specially compiled for the purposes of the discussion of infirmities in paragraph 206 of Chapter X.

Table XIV gives the data, for certain selected castes and tribes, of civil condition for quinquennial age-groups, and distinguishes the religions and tribes in each caste.

Table XVI gives the age-grouping of Europeans and Allied Races and Anglo-Indians.

Table XXI gives the occupation of selected castes, tribes or races for the same local divisions as Imperial Table IX.

Proportional figures are given in the Subsidiary Tables as follows :—

Subsidiary Table I gives the castes classified according to their traditional occupations, and

Subsidiary Table II gives the variation in the number of persons composing the caste, tribe or race since 1881.

209. The instructions to enumerators printed on the cover of the enumeration book read as follows :— *Census Instructions.*

"Column 8 (caste).—Enter the caste or tribe of Hindus, Musalmans, Jains, Sikhs, Aryas, Brahmos and aboriginal tribes, and the race of Christians, Buddhists, Parsis, etc."

The supplementary instructions to Supervisors printed as Appendix I to the Code of Census Procedure 1921 go into great detail, and only a few paragraphs of these instructions will be quoted here :—

"The castes and tribes in this Province are well known. The names of exogamous groups, or words indicating locality, occupation or titles should not be entered. Thus, Bania is a functional term, including many different castes such as Aggarwal, Oswal, Mahesri, etc. Words like Bengali, Hindustani, Madrasi and Nepali must be rigorously tabooed. Musalmans are divided, not only into racial groups, such as Sheikh, Sayad, Moghal and Pathan, but also into functional groups such as Julaha, Penja, etc. Names of functional groups should not be noted as tribes except where they are recognised as separate tribes, *e.g.*, Lohars, Tarkhans.

In respect of Faqirs and Sadhus, who have abandoned their caste, the order to which they belong should be noted in this column......

When a person of low caste wishes to return himself as belonging to a high caste to which he obviously does not belong, e. g., a "Teli" wishes to return himself as a "Moghal" he should be shown as belonging to the caste or tribe to which he is generally supposed to belong. Again if a "Jat or Sunar" wishes to be entered as "Rajput" he should not be entered as a Rajput if the people do not call him a Rajput. Trag Jats of Isa Khel should, for instance, not be returned as Niazi Pathans even though they should very much wish this to be done....

The functional group of Sunars has frequently been treated as a caste, but this should be avoided as far as possible. Persons who have recently joined the profession and are not known as Sunars by caste should be recorded as belonging to their original caste.......

Members of the Arya Samaj, who say that they have abandoned caste or do not wish to have any caste recorded, may be entered as Arya by caste.

No Sikh should be pressed to name the caste to which he belongs if he does not wish to do so; in such cases the word "Sikh" may be entered in this column.

Women.—The caste or tribe of an unmarried girl will be the same as that of her father. In respect of a married woman the entry should be as stated by her husband. No enquiry should be made as to the caste or tribe of a woman before her marriage. Her present caste or tribe should be asked and the answer taken down without question. Among Hindus the caste of a woman will be that of her husband. But among Mohamadans the husband may, in some cases, like to have one of his wives put down as Pathani, the other as Jatti, and a third as a Bilochni............"

In order to eliminate incorrect classification an index of castes and tribes of the Punjab was prepared and circulated for the guidance of district census officers. This index contained the names of castes and tribes recognised as such, as well as the names of certain sub-castes and clans, so that when only the clan, or *gotra* was recorded in the schedule, it could always be referred to its proper caste. List B contained 42 local and geographical names and functional terms, for example, Baghban, Beldar, Dogra, Maniar, Paharia, Purbia, Sepi and so forth, which are not true caste designations. List C gave a number of synonyms for the terms used in List A.

While every effort, therefore, was made to prevent wrong entries arising from ignorance, yet a certain amount of inaccuracy was inevitable owing to deliberate misstatement. The common source of error under this head arose from cases in which a group of persons claimed to belong to a higher caste than that in which they were habitually classified.

Claims for alterations in classifications.

210. The chief claims for a re-classification of caste which occurred in the present census are noted in the margin.

	Recognised Caste.	Caste claimed.
1	Kanet, Rathis, Rawats and Thakars.	Rajputs.
2	Nais (represented by Raja Brahman Maha Sabha, Lahore)	Raja Brahman.
3	Nais (represented by the Indraprastha Thakur Maha Sabha, Delhi).	Rajput or Thakur.
4	Mahtons	Rajputs.
5	Bhat	Brahman Bhat or Brahman Rai
6	Jangida	Brahmans.
7	Mehra	Mehra Rajput.
8	Tamboli	Kshatriyas.
9	Hindu Ramgarhias	Dhiman Brahmans.

The claims were dealt with in the following way:—

(1) A deputation of Kanets, Rathis, etc., who wished themselves to be styled Rajputs was received, and it was decided that there would be no objection to their being included amongst Rajputs if the Ruling Rajput Chiefs of the places where the community has a majority did not object. Different opinions were received and accordingly with the permission of the Punjab Government the following head was adopted in Chapter XIII.

Rajput and Allied Castes.				
Rajput.	Kanet.	Rathi.	Thakur.	Rawat.

(2) Claims 2 and 3 were rejected.

(3) Claim No. 4 was admitted, but it was too late then to issue instructions to district officers, and the tables still record the number of Mahtons.

(4) After discussion with the representatives of the Brahman Roy Sabha it was decided that persons recording themselves as Brahm Batt or Brahman Roi will not be grouped with Bhats, Bhataras, etc., as in 1911.

The instructions to enumerators were—

"Persons who described themselves as Brahm Batt or Brahman Roi should be recorded as such, they should not be confused with Bhats or Bhataras."

These instructions had been issued when a protest was received from the Doaba Brahman Bhat on the ground that many Bhats who had no connection

with Brahman Bhats or Brahman Rois had taken advantage of the instructions to record themselves as such. During compilation it was found that only 3,566 persons in the Punjab and 21 in Delhi had recorded themselves as Brahman Bhat, and these were accordingly included among Bhat Hindus.

(5) The claim of the Mehra Rajputs was also admitted. The deputation asserted that persons belonging to this community were to be found in the districts of Karnal, Ambala, Rohtak and Hissar and in the Jind State, but on compilation it was found that only 2,226 persons returned themselves as Mehra Rajputs, and as these were not in the localities stated by the claimants all of them were included among Jhiwars in Table XIII.

The Kambohs represented by the " All India Kamboj Conference " wished themselves to be classed as Kambojs which, they said, was the correct name and the following instruction was, therefore, issued :—

" Kamboh and Kamboj are different forms of the name of the same caste, which ever term is used by the persons themselves should be recorded."

After compilation it was found that 146,687 persons recorded themselves as Kamboh and 52,038 as Kamboj. In Table XIII therefore, Kambohs have been shown as " Kamboh (Kamboj) ". As indicative of the great store which certain communities set on caste may be instanced the fact that the Dhiman Brahmans sent a deputation long after the Imperial Tables had been printed. This deputation claimed that the persons shown in Imperial Tabe XIII as Hindu Ramgarhias, totalling 5,156 males and 4,494 females, comprised mainly in the districts of Hoshiarpur, Jullundur, Ludhiana and Gurdaspur, should be classed as Dhiman Brahmans. The deputation was informed that the head in Imperial Table XIII could not be altered at that late stage, and no useful purpose would be served by discussing the merits of the claim.

Classifications of castes and modern disintegrating tendencies.

211. The classification adopted in 1891 was based on considerations of ethnology, history, and function, and was discarded in 1901 in favour of a new classification by social precedence. The enquiries that were made for this purpose, though they elicited a considerable amount of interesting information, roused here and there a certain amount of resentment.*

In Imperial Table XIII of the present report the various castes are shown alphabetically, and where more than one religion is returned by the members of a caste, separate figures have been given for each. In this connection Mr. Middleton makes some very interesting observations, which I quote in *extenso*. He says :—

" My intention was to confine these chapters almost entirely to statistics. I was going to point out that the learned treatise on caste included in past census reports (which are in reality quite extraneous and unnecessary as part of the census) has led to a tradition that the census Officer is an arbiter on caste questions. I decline to take up that position. I would have given no decision in caste disputes, but would have mentioned the aspiration of such people as the Ahluwalias with all sympathy. I had intended pointing out that there is a very wide revolt against the classification of occupational castes ; that these castes have been largely manufactured and almost entirely preserved as separate castes by the British Government. Our land records and official documents have added iron bands to the old rigidity of caste. Caste in itself was rigid amongst the higher castes, but malleable amongst the lower, we pigeon-holed everyone by castes and if we could not find a true caste for them labelled them with the name of an hereditary occupation. We deplore the caste system and its effect on social and economic problems, but we are largely responsible for the system which we deplore. Left to themselves such castes as Sunar, Tarkhan and Lohar would rapidly disappear and no one would suffer. The large number of people who have refused to record any caste at this census is a sign of progress and the breaking of customary bonds, it is no reflection on the administration of the census. Personally I am very strongly in favour of all caste statistics being abandoned at the next census, though in this I probably go further than most Europeans. Government's passion for labels and pigeon-holes has led to a crystallisation of the caste system, which, except amongst the aristocratic castes was really very fluid under indigenous rule.

There is no justice in labelling a Government official whose ancestors have worked in similar capacities as a Sunar, a Tarkhan or by any other term denoting

*Thus the Ahluwalias protested against being associated with Kalals (the distillers of wine). The Kayasth resented being described as Adham Shudras of a mixed origin, in the Census Report of 1911.

a menial occupation with which his family has no connection whatever. Nor is there any good to be obtained from constant reiteration of the doubtful fact that Ahluwalias are of the distilling and wine-selling castes.

If the Government would ignore caste it would gradually be replaced by something very different amongst the lower castes. It is the inflexibility of the lower castes more than of the higher that paralyses the Indian's effortsat economic salvation, and that inflexibility is not inherent in the caste system itself."

While there is much in Mr. Middleton's argument, it is going too far to saddle Government with the responsibility for maintaining caste distinctions and the recognition of caste is a far too radical and inherent social phenomenon to be materially affected by the more or less academic classification adopted for the purpose of the Census reports. Here and there a printed record of a tradition or historical practice may retain a community in the bonds of an effete institution, but in the case of caste distinctions it is very doubtful whether these would be maintained simply on the strength of the Census statistical tables, were the progress of social evolution to require their abolition. It may indeed be argued, and has been argued that Government, so far from maintaining the caste system, has been one of the chief agencies in destroying it. By the introduction of Western Art, Sciences and ideas, many of the old village industries have become unprofitable, and people from all castes have flocked together in increasing numbers in mills, mines and workshops, with the result that the traditional caste has been abandoned together with the traditional occupation. The increase of trade and commerce and of railway transport, which has brought into contact all grades of the community, has tended towards the same end. Likewise Western Education has fostered the idea of equality, and education no longer remains the monopoly of the higher castes. On the whole, therefore, it appears to be nearer the truth that Government, so far from setting up and maintaining caste barriers, has, by its political, educational and economic activities, tended to produce a disintegration of the caste system.

Chief Hindu, Musalman and Sikh Castes.

212. The marginal statement shows the castes of the 3 great communities which contribute 50,000 or more to the population of the Punjab province. The actual total strength is shown as well as the percentage of main religion each caste. T pure castes, namel those in which th members of only single religiou group are comprised are as follows :—

Hindus.

Rathis, Dhanak Arya.

Musalmans.

Biloch, Awan Mussalli, Machh Pathan, She Sayad, Kashan Qassab, Qureshi, M Moghal, Kroi Dogar, Khols."

Sikhs. he

There are no pn castes.

HINDU, MUSALMAN AND SIKH CASTES FOR PUNJAB ONLY.

Serial Number	Castes.	Total strength 000's omitted.	Percentage to the total strength of the caste.	Serial No.	Castes.	Total strength 000's omitted.	Percentage to the total strength of caste.
	Hindu Castes.				*Musalman Castes.*		
1	Jat ..	1,055	19·3	12	Teli ..	311	99·4
2	Brahman ..	992	99 4	13	Machhi ..	279	100·0
3	Chamar ..	974	85·4	14	Pathan ..	267	100·0
4	Chuhra ..	693	92·4	15	Sheikh ..	257	100·0
5	Arora ..	595	83·1	16	Sayad ..	250	100·0
6	Rajput ..	521	27·7	17	Faqir ..	239	86·3
7	Khatri ..	393	86·2	18	Mirasi ..	227	95·8
8	Aggarwal ..	325	92·1	19	Lohar ..	219	67·8
9	Kanet ..	280	97·2	20	Nai ..	219	60·7
10	Jhiwar ..	226	60·8	21	Kashmiri ..	170	100·0
11	Ahir ..	200	98·5	22	Dhobi ..	151	90·4
12	Kumhar ..	165	28·7	23	Qassab ..	122	100·0
13	Dagi and Koli ..	164	99·4	24	Meo ..	114	100·0
14	Tarkhan ..	163	26·5	25	Qureshi ..	98	100·0
15	Gujjar ..	159	25·3	26	Jhiwar ..	94	25·3
16	Ghirath ..	136	99·3	27	Maliar ..	89	100·0
17	Rathi ..	118	100·0	28	Moghal ..	89	100·0
18	Nai ..	108	29·9	29	Khoja ..	87	100·0
19	Mali ..	93	98·9	30	Kamboh ..	81	40·7
20	Dhanak ..	87	100·0	31	Dogar ..	74	100·0
21	Lohar ..	84	26·0	32	Mallah ..	70	94·6
22	Sunar ..	79	61·7	33	Khokhar ..	69	100 0
23	Saini ..	73	57·0	34	Bharai ..	61	98·4
24	Julaha ..	59	9·1	35	Barwala ..	59	89 4
25	Arya ..	51	100·0		*Sikh Castes.*		
	Musalman Castes.			1	Jat ..	1.823	33·4
1	Jat ..	2,584	47·3	2	Chamar ..	163	14·3
2	Rajput ..	1,329	70·7	3	Tarkhan ..	140	22·7
3	Arain ..	1,089	99·8	4	Arora ..	118	16·5
4	Julaha ..	583	90·1	5	Kamboh (Kamboj) ..	84	42·2
5	Biloch ..	531	100·0	6	Ramgarhia ..	68	87·2
6	Gujjar ..	466	74·2	7	Unspecified ..	67	68·4
7	Awan ..	440	100·0	8	Mazhabi ..	64	98·5
8	Mochi ..	428	98·4	9	Khatri ..	63	13·8
9	Kumhar ..	386	67·2	10	Mahtam ..	63	67·0
10	Mussalli ..	361	100·0	11	Saini ..	54	42·2
11	Tarkhan ..	313	50·8	12	Jhiwar ..	52	13·9

The castes which include the fewest of other religions are the Mazhabi (98·5 per cent. of Sikhs), Ramgarhia (87·2 per cent of Sikhs), and Mahtam (67·0 per cent of Sikhs).

Castes which show great admixture of all three religious communities are the Jat (19·3 per cent. Hindus, 47·3 per cent. Musalmans, 33·4 per cent. Sikhs,) Rajput (27·7 per cent. Hindus, 70·7 per cent. Musalmans,) Kumhar (28·7 per cent. Hindus, 67·2 per cent. Musalmans), Gujjar (25·3 per cent. Hindus, 74·2 per cent. Musalmans) and Nai (29·9 per cent. Hindus, 60·7 per cent. Musalmans). As was to be expected, the functional castes, such as Kumhar, Tarkhan, Gujjar, Nai, Lohar and Julaha contain a great proportion of two or more of the main religious communities.

As regards the pure Hindu castes the Dhanak belongs especially to Hindostan and not to the Punjab proper, and is confined to the South-East of the Province. It is a low caste tribe and even the Chuhra is said to look down on it. The Rathis are said by Mr. Rose to be

(1) a tribe of Jats in Rohtak who are among the old inhabitants of the tract, and claim to be by origin Tanwa Rajput, or

(2) a caste of Rajputs found in the Kangra Hills and in Chamba.

According to Hutchison the Rathis:—

"as a hill tribe, are older than the Brahmos and Rajputs, who came from the plains at a latter period; and we may safely conclude that the oldest strata among them are descended, either directly or by the half-blood, from the early Aryan colonists of the hills. The first Aryan immigrants, as we now know, intermarried freely with the aboriginies, resulting in a fusion of the two races from which may have sprung the various low caste tribes now forming such an important part of the population. But the completeness of the fusion was not at all times uniform, and later waves of immigration may have remained more or less isolated, forming the nucleus of the community which now comprises the Thakurs and Rathis.....................................We may, therefore, regard the Thakurs and Rathis as being now a conglomerate people, representing the ultimate product of the welding together of many different contributions to their ranks."

The term Arya refers to those Hindus who have adopted certain religious beliefs, and, therefore, naturally, does not include any Musalmans or Sikhs. Of other nearly pure Hindu tribes the Brahman (99·4 per cent), Kanet (97·2 per cent), Ahir (98·5 per cent.), Dagi and Koli (99·4 per cent.), Ghirath (99·3 per cent.) and Mali (98·9 per cent) may be mentioned. Of the purely Hindu castes, the Rathi, the Kanet, the Dagi and Koli, and the Ghirath are residents of the hills, and were, therefore, more likely than Hindus in the plains to resist conversion to Islam. On the other hand, the absence of any pure Sikh castes is to be attributed to the fact that Sikhism was a religion adopted by Hindus, who would naturally ...in their original caste.

213. As pointed out in paragraph 212 no attempt has been made at this ...nsus to group castes according to their social standing, but in Subsidiary Table ...an effort has been made to classify them as far as possible according to their tradi...nal occupations. The subject will be dealt with in detail in Chapter XII, and ...will suffice to refer here to the groups in each province according to occupational classification. The list is given in the margin. Classification of caste according to their traditional occupations.

Punjab.		Delhi.	
...raditional occupation	Proportion per mille of population.	Traditional occupation	Proportion per mille of population.
...tivators	454	Cultivators	258
...vers and Carders	79	Traders and Pedlars	247
...s and Pedlars	77	Weavers and Carders	112
... workers	64	Priests and Devotees	107
...l Devotees	56	Leather workers	101
...s	54	Astrologers	79
...s	40	Cattle rearers	50
...	41	Scavengers	49
...rers	36	Confectioners	26
... and Boatsmen	30	Fishermen and Boatmen.	26

214. The variation in population of the various castes since 1881, is exhibited in Subsidiary Table II appended to this chapter, and these variations should be compared with a figure of 5·6 per cent. increase in the total population of the provinces, Punjab and Delhi. The more noticeable increases are found in the case of the Kamboh (+15·3 per cent.), Khokhar (+15·4 per ...), Mahtam (+15·3 per cent.), Mussalli (+16·6 per cent.), Qureshi (+40·2 ...nt.), Rathi (+20·7 per cent.), Khoja (+38·1 per cent.), and Rajput (...6·6 per cent.); while marked decreases are shown by Chuhra (−17·4 per Variations since 1911.

cent.), Dumna (−49·0 per cent.), Ghirath (−19·9 per cent.), Kanet (−28·6 per cent.) and Sunar (−17·9 per cent.).

Whether these variations are significant, and if significant, to what causes they are to be referred, would require more examination than is possible at the present stage.

Europeans and Anglo-Indians.

215. Imperial Table XVI gives the data for sex and age of the European and Anglo-Indian population for each district and State in the Punjab. The distribution of Europeans and Allied Races in the various districts of the Punjab is shown in the table in the margin. The districts containing the head-quarters of Government and then the districts containing military cantonments naturally have the greatest number of Europeans. No other comment on the figures is required. The total number of British subjects of European and Allied races, including Armenians was 21,546 comprising, 15,860 males and 5,686 females. Of the total, number of persons 21,154, or over 98 per cent., reside in British Territory. No definition of the term Anglo-Indian was adopted for the preparation of the Census Schedule. The total number of Anglo-Indians recorded in the Census is 4,499 (2,397 males and 2,102 females). The districts of Lahore, Ambala, Rawalpindi and Multan alone include more than 100 Anglo-Indians each. If the term Anglo-Indian is to include all those who have Indian and English blood in their veins from their recent ancestry then the census figures seem remarkably small, and there appears to be no immediate prospect of obtaining the correct number of persons who should be classed as Anglo-Indians in this sense. The total number of persons returned as of European and Anglo-Indian descent is 26,454 while the number of persons returning one or other European languages as their mother tongue was 27,075. The agreement is as close as could be expected.

Distribution of Europeans and Allied Races in Districts of the Punjab.

Districts contributing persons.						
Under 20.	20 to 50.	50 to 100.	101 to 500.	501 to 1,000	1,000 to 2,000.	over 2,000.
Hissar. Karnal. Jhang. Dera Ghazi Khan.	Rohtak. Ludhiana. Sheikhupura Gujrat.	Gurgaon. Kangra. Gujranwala. Shahpur. Jhelum. Montgomery. Lyallpur.	Hoshiarpur. Amritsar. Gurdaspur. Attock. Mianwali. Muzaffargarh.	Jullundur	Ambala. Ferozepore. Sialkot. Multan.	Simla. Lahore. Rawalpindi.

Distribution of Anglo-Indians in the Districts of the Punjab.

Below 5.	6 to 20.	21 to 50.	51 to 100.	101 to 500.	501 to 1,000.	over 1,000.
Rohtak. Kangra. Hoshiarpur. Ludhiana. Ferozepore. Attock. Muzaffargarh Dera Ghazi Khan. Lyallpur.	Karnal. · lundur. Sheikhupura Jhelum. Montgomery Jhang.	Gurdaspur. Gujranwala. Gujrat. Shahpur. Mianwali.	Hissar. Gurgaon. Amritsar Sialkot.	Simla. Rawalpindi. Multan.		Ambala. Lahore.

I. Castes classified according to their traditional occupations. II. Variation in caste, tribe, since 1881.

SUBSIDIARY TABLE I.

Castes classified according to their traditional occupations.

GROUP AND CASTE.	STRENGTH 000's OMITTED.		PROPORTION *per mille* OF THE POPULATION OF THE PROVINCE.	
	Punjab.	Delhi.	Punjab.	Delhi.
1	2	3	4	5
Agriculturists	15,835	232	631	474
(a) LANDHOLDERS	20	..	1	..
(b) CULTIVATORS	11,395	126	454	258
1. Jat	5,464	48	218	98
2. Rajput	1,880	27	75	55
3. Arain	1,091	3	43	5
4. Biloch	531	..	21	..
5. Awan	440	..	17	..
6. Kanet	288	..	11	..
7. Pathan	267	17	11	35
8. Kamboh	199	..	8	..
9. Ghirath	137	..	5	..
10. Meo	114	4	5	8
11. Saini	128	2	5	4
12. Mali	94	8	4	15
13. Mughal	89	4	3	9
14. Rathi	118	..	5	..
15. Mahar	89	..	4	..
16. Qureshi	98	2	4	4
17. Khokhar	69	..	3	..
18. Labana	56	..	2	..
19. Tagah	..	5	..	11
20. Lodha	..	2	..	4
21. Thakkar	..	1	..	3
22. Naik	..	1	..	3
23. Others	243	2	10	4
(c) CULTIVATORS AND CATTLE REARERS.	911	24	36	50
24. Dogar	74	..	3	..
25. Gujjar	628	13	25	27
26. Ahir	203	11	8	23
27. Others	6	..	..	..
(d) GRAZIERS AND DAIRYMEN ..	53	3	2	6
28. Gadaria	..	2	..	5
29. Others	53	1	2	1
(e) FISHERMEN, BOATMEN, ETC ..	749	12	30	26
30. Jhiwar	372	11	15	23
31. Machhi	279	1	11	3
32. Mallah	74	..	3	..
33. Others	24	..	1	..
(f) HUNTERS AND FOWLERS ..	147	..	6	..
34. Mahtam	94	..	4	..
35. Others	53	..	2	..
(g) EXTRACTION OF MINERALS ..	44	2	2	4
36. Agari	..	2	..	4
37. Others	44	..	2	..
(h) BARBERS	361	6	14	11
38. Nai	361	6	14	11
(i) WASHERMEN	167	4	7	7
39. Dhobi	167	4	7	7
(j) WEAVERS AND CARDERS ..	1,988	55	79	112
40. Julaha	647	9	26	19
41. Chamar	1,140	46	45	93
42. Kashmiri	170	..	7	..
43. Others	31	..	1	..
Dyers	156	1	6	2
44. Chhimba	125	1	5	2
45. Others	31	..	1	..
Tailors	38	..	2	..
Carpenters	1,032	7	41	15
46. Tarkhan	616	5	24	10
47. Ramgarhia	78	..	3	..
48. Lohar	323	2	13	5
49. Others	15	..	1	..

GROUP AND CASTE.	STRENGTH 000's OMITTED.		PROPORTION *per mille* OF THE POPULATION OF THE PROVINCE.	
	Punjab.	Delhi.	Punjab.	Delhi.
1	2	3	4	5
Blacksmiths	328	2	13	5
50. Lohar	323	2	13	5
51. Others	5	..	..	..
Masons	13	..	1	..
Potters	575	9	23	19
52. Kumhar	574	9	23	19
53. Others	1	..	..	..
Glass and lac workers ..	2	..	..	..
Gold and silversmiths	128	1	5	3
54. Sunar	128	1	5	3
Brass and coppersmiths ..	4	..	..	..
Confectioners and grain purchasers ..	661	13	26	26
55. Jhiwar	372	11	15	22
56. Machhi	279	1	11	3
57. Others	10	1	..	1
Oil pressers (Teli)	313	3	12	6
58. Teli	313	3	12	6
Distillers	18	..	1	..
Butchers	494	12	20	24
59. Qassab	122	..	5	..
60. Jhiwar	372	11	15	22
61. Others	..	1	..	2
Leather workers	1,621	49	64	101
62. Chamar	1,140	46	45	93
63. Mochi	435	..	17	..
64. Khatik	..	3	..	8
65. Others	46	..	2	..
Basket makers and mat-makers ..	89	..	4	..
Scavengers	1,363	24	54	49
66. Chuhra	750	14	30	30
67. Massalli	361	..	14	..
68. Dhanak	87	5	3	9
69. Dagi and Koli	165	5	7	10
70. Others	..	..	..	..
Traders and pedlars	1,929	121	77	247
71. Khatri	456	9	18	18
72. Arora	716	..	29	..
73. Bania	374	31	15	64
74. Sheikh	257	80	10	164
75. Others	126	1	5	2
Carriers by pack animals ..	24	1	1	2
Priests and devotees	1,395	52	56	107
76. Brahman	998	38	40	78
77. Sayad	250	11	10	23
78. Bairagi	..	1	..	2
79. Jogi	70	1	3	2
80. Others	78	1	3	1
Bards	30	..	1	..
Astrologers	1,010	38	40	79
81. Brahman	998	38	40	79
82. Others	12	..	..	..
Writers	7	7	..	15
Singers and dancers	348	1	14	3
83. Mirasi	237	..	9	..
84. Bharai	62	..	3	..
85. Others	49	1	2	3
Labourers	30	..	1	..
Domestic Servants	30	2	1	4
Village watchmen and menials ..	66	..	3	..
86. Barwala	66	..	3	..
87. Others	..	..	..	..
Others	277	3	11	5
88. Faqir	277	3	11	5

SUBSIDIARY TABLE II.

Variation in caste, tribe, since 1881.

Caste or Tribe.	Punjab.	Delhi.	Punjab and Delhi.									
	Persons (000's omitted).							Percentage of variation increase (+), decrease (−).				Percentage of net variation 1881—1921.
	1921	1921	1921	1911	1901	1891	1881	1911—1921	1901—1911	1891—1901	1881—1891	
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Ahir	203	11	214	209	205	196	173	+2·5	+1·5	+4·6	+13·5	+23·6
2. Arain	1,091	3	1,094	978	1,007	889	795	+11·8	−2·9	+13·3	+11·8	+37·5
3. Arora	716	..	716	674	653	570	512	+6·3	+3·3	+14·6	+11·3	+39·9
4. Awan	440	..	440	426	421	369	332	+3·4	+1·1	+14·2	+11·0	+32·6
5. Bania	374	31	405	404	452	442	437	+0·3	−10·5	+2·3	+1·1	−7·2
6. Barwala	66	..	66	64	69	64	55	+3·5	−7·3	+7·6	+16·5	+20·4
7. Bharai	62	..	62	58	66	67	56	+5·9	−11·1	−1·9	+20·0	+10·9
8. Biloch	531	..	531	552	468	359	311	−0·1	+13·8	+30·2	+15·7	+71·3
9. Brahman	998	38	1,036	1,018	1,123	1,107	1,069	+1·8	−9·3	+1·4	+3·5	−3·1
10. Chamar	1,140	46	1,186	1,129	1,208	1,178	1,066	+5·0	−6·6	+2·6	+10·5	+11·2
11. Chhimba	125	1	126	129	152	145	103	−2·9	−14·6	+4·8	+40·0	+21·5
12. Chuhra	750	14	764	926	1,189	1,188	1,052	−17·4	−22·1	+0·1	+12·9	−27·4
13. Dagi and Koli	165	5	170	175	155	170	176	−2·8	+13·1	−8·8	−3·7	−3·4
14. Dhanak	87	5	92	83	77	74	66	+10·2	+7·6	+5·2	+11·5	+39·0
15. Dhobi	167	4	171	156	147	139	124	+9·5	+6·0	+5·6	+12·5	+37·7
16. Dogar	74	..	74	68	75	70	63	+8·6	−8·8	+7·7	+10·1	[illegible]
17. Dumna	40	..	40	79	59	69	71	−49·0	+34·1	−14·9	[illegible]	[illegible]
18. Faqir	277	3	280	280	386	313	114	−0·1	−27·5	+23·3	[illegible]	[illegible]
19. Ghirath	137	..	137	171	170	174	160	−19·9	+·6	−2·0	[illegible]	[illegible]
20. Gujjar	628	13	641	610	632	614	552	+5·8	−3·3	+2·9	[illegible]	[illegible]
21. Jat	5,464	48	5,512	4,957	4,942	4,430	4,167	+11·2	+0·3	[illegible]	[illegible]	[illegible]
22. Jhiwar	372	11	383	360	460	468	426	+6·3	−21·7	[illegible]	[illegible]	[illegible]
23. Jogi-Rawal	81	1	82	83	76	91	90	−1·5	+10·2	[illegible]	[illegible]	[illegible]
24. Julaha	647	9	656	635	657	625	586	+3·3	−3·3	[illegible]	[illegible]	[illegible]
25. Kamboh	199	..	199	172	174	151	130	+15·3	−0·9	[illegible]	[illegible]	[illegible]
26. Kanet	288	..	288	404	390	370	346	−28·6	+3·6	[illegible]	[illegible]	[illegible]
27. Kashmiri	170	..	170	178	193	196	152	−4·8	−7·9	[illegible]	[illegible]	[illegible]
28. Khatri	456	9	465	433	436	419	393	+7·4	[illegible]	[illegible]	[illegible]	[illegible]
29. Khoja	87	..	87	63	99	90	62	+38·1	[illegible]	[illegible]	[illegible]	[illegible]
30. Khokhar	69	..	69	60	108	130	36	+15·4	[illegible]	[illegible]	[illegible]	[illegible]
31. Kumhar	574	9	583	550	569	515	467	+5·9	[illegible]	[illegible]	[illegible]	[illegible]
32. Labana	56	..	56	58	56	55	47	−2·6	[illegible]	[illegible]	[illegible]	[illegible]
33. Lohar	323	2	325	323	351	323	291	+0·6	[illegible]	[illegible]	[illegible]	[illegible]
34. Machhi	279	1	280	280	236	189	161	+0·3	+18·3	[illegible]	[illegible]	[illegible]
35. Mahtam	94	..	94	82	83	57	52	+15·3	−1·2	+45·4	[illegible]	[illegible]
36. Mali	94	8	102	104	113	181	66	−1·7	−8·2	−37·7	+176·0	[illegible]
37. Maliar	89	..	89	90	81	Not available		−1·3	+10·9	Not available.		[illegible]
38. Mallah	74	..	74	78	73	77	62	−4·3	+6·3	−5·3	+25·6	[illegible]
39. Meo	114	4	118	130	147	121	116	−9·1	−11·2	+21·6	+3·7	[illegible]
40. Mirasi	237	..	237	227	247	229	192	+4·5	−8·1	+8·2	+19·4	[illegible]
41. Mochi	435	..	435	419	415	380	332	+3·7	+1·1	+9·1	+14·7	[illegible]
42. Moghal	89	4	93	99	98	118	92	−5·2	+·3	−16·9	+29·2	[illegible]
43. Musalli	361	..	361	310	57	Not available.		+16·6	+439·2	Not available.		
44. Nai	361	6	367	350	376	357	324	+4·5	−6·9	+5·5	+10·1	+13·1
45. Pathan	267	17	284	292	264	195	188	−2·7	+10·8	+35·6	+3·7	+51·5
46. Qassab	122	..	122	120	118	108	92	+2·6	+1·2	+9·2	+18·5	+34·3
47. Qureshi	98	2	100	71	53	Not available		+40·2	+33·9	Not available.		
48. Rathi	118	..	118	98	38	101	85	+20·7	+154·2	−61·9	+18·5	+38·6
49. Rajput	1,880	27	1,907	1,635	1,798	1,759	1,662	+16·6	−9·0	+2·2	+5·8	+14·7
50. Saini	128	2	130	113	127	125	153	+14·9	−11·0	+1·1	−17·9	−15·1
51. Sayad	250	11	261	247	238	215	200	+5·5	+3·8	+10·6	+7·8	+30·6
52. Shekh	257	80	337	339	321	332	336	−·6	+5·4	−3·3	−1·1	+0·2
53. Sonar	128	1	129	158	177	163	145	−17·9	−10·6	+8·7	+12·5	−10·3
54. Tarkhan	616	5	621	646	681	618	563	−3·9	−5·0	+10·1	+9·8	+10·3
55. Teli	313	3	316	296	322	301	261	+6·6	−7·9	+6·6	+15·7	+21·1

CHAPTER XII.

Occupation and Industries.

SECTION I.—GENERAL SURVEY OF OCCUPATIONS.

SECTION II.—LOCAL DISTRIBUTION OF OCCUPATIONS.

SECTION III.—COMPARISON WITH PREVIOUS CENSUSES.

SECTION IV.—OCCUPATIONS BY CASTE AND FEMALE OCCUPATIONS.

SECTION V.—THE INDUSTRIAL CENSUS.

SECTION VI.—CONDITIONS OF LABOUR AND COTTAGE INDUSTRIES.

Section I.—General survey of occupations.

216. The statistics of occupation and industries will be found in Imperial Tables XVII to XXII. Table XVII is a general table, showing the number of persons following each group of occupation, according to the scheme of classification prescribed by the Census Commissioner, for each district and State, and for the four cities of Lahore, Amritsar, Multan and Delhi. Table XVIII shows the subsidiary occupation of persons whose principal occupation is agriculture. This table is sub-divided into three parts for (1) rent receivers, (2) rent payers, and (3) farm servants and field labourers. **Reference to Statistics.**

Table XIX gives the number of persons pursuing certain selected subsidiary occupations combined with certain principal occupations.

Table XX shows the distribution of occupations by religion for each province as a whole, and for the cities of each province.

Table XXI furnishes particulars of occupations of selected castes and races in areas where they are especially numerous or otherwise important. The occupations are arranged under 13 main heads which correspond to the sub-classes of the scheme of classification.

Table XXII which embodies the results of the industrial census is divided into seven parts:—

Part I shows for the province as a whole the number of persons employed in each kind of industry, distinguishing between industrial establishments in which mechanical power is used, and those in which it is not, and classifying them according to the number of persons employed.

Part II gives the district figures without the classification of establishments according to power and number of persons employed given in Part I.

Part III gives the classification of industrial establishments according to the class of owners and managers.

Parts IV and V deal with the caste, race, and birth-place of skilled and unskilled workmen respectively in selected industries.

Part VI furnishes details of the power employed in factories.

Part VII gives the number of looms in use in textile establishments.

The salient features of the statistics are exhibited in the following two sets of Subsidiary Tables appended to this chapter:—

Occupational Subsidiary Tables.

I. General distribution by occupation (Punjab and Delhi).
II. Distribution by occupation in Natural Divisions.
III. Distribution of agricultural, industrial, commercial and professional population in Natural Divisions, Districts and States.
IV. Occupations combined with agriculture (where agriculture is the subsidiary occupation).
V. Occupation combined with agriculture (where agriculture is the principal occupation).
VI. Occupation of females by sub-classes and selected orders and groups (Punjab and Delhi).
VII. Selected occupations 1921, 1911 and 1901.
VIII. Occupations of selected castes (Punjab and Delhi).
IX. Number of persons employed on the 18th March 1921 on Railways and in the Irrigation Department, in the Punjab and Delhi.
IX-A. Number of persons employed in the Post Office and Telegraph Department on the 18th March 1921 in the Punjab and Delhi.

Industrial Subsidiary Tables.

I. Distribution of industries and persons employed.
II. Particulars of establishments employing 20 or more persons in 1911 and 1921.
III. Organisation of establishments.
IV. Place of origin of skilled employees.
V. Place of origin of unskilled employees.
VI. Distribution of certain races in certain industrial establishments.
VII. Proportional distribution of adult women and of children of each sex in different industries.
VIII. Distribution of power.

Actual entries of occupation returned are given according to groups and in alphabetical order in Appendix B to Part IV of the Census Report.

System of enumeration and nature of information.

217. The system of enumeration was the same as in 1911. Of the 16 columns in the census schedule, three were provided for the entry of occupation as given in the margin. In column 9 was to be entered the principal occupation or means of livelihood of all persons who actually did work or carried on business whether personally or by means of servants, or who lived on the income of private property or on their pensions, etc. Column 10 was reserved for any occupation which the actual worker, shown in column 9, might pursue in addition to his principal occupation, or for any supplementary means of livelihood which he might possess. It was specially laid down that column 10 was to be left blank in the case of dependants, or those persons who had no additional occupation. In the case of women, children and old or infirm persons who did not do work or carry on business, either personally or by means of servants, the principal occupation of the head of the family or other person who supported them was to be shown in column 11. These general instructions were supplemented as in 1911 by special directions issued regarding the filling in of each column. The directions put briefly were:—

Occupation or means of subsistence of actual workers.		For dependants the occupation of the workers by whom supported.
Principal.	Subsidiary.	
9	10	11

"(1) Column 9.—Only those women and children should be shown as workers who help to augment the family income. To illustrate this rule it was stated that a woman who looked after

her house and cooked the food was not a worker but a dependant, whereas a woman, who collected and sold firewood or cowdung was thereby adding to the family income and should be shown as a worker. Similarly, a woman who regularly assisted her husband in his work (*e.g.*, the wife of a potter who fetches the clay from which he makes his pots) was an actual worker, but not one who merely rendered a little occasional help.

(2) Vague words like "Labour" or "Service" or shopkeeping should be avoided. In the case of service, distinction should not only be made between the different kinds of service, but the exact occupation followed should be recorded. In the case of clerks, the occupation of their employers must be shown. Persons living on agriculture must be distinguished as rent receivers (*malik*) and rent-payers (*mazariah*).

Column 10.—Where a man has two occupations the principal one is that on which he relies mainly for his support and from which he gets the major part of his income. Subsidiary occupation should be entered if followed at any time of the year (whether followed throughout the year or during a part of it)."

In spite of the clear instructions issued, and of the trouble taken by district officers to train the enumerators, the entries returned in the schedules are not free from doubt. In numerous cases, particularly in the Multan district, generic terms like "Labour" and "Service" were used, and such entries for want of exact specification were classified as belonging to the general group. It is for this reason that the number returned under the head "Insufficiently described occupation" is excessive.

The compilation of Table XVII showing occupations of population was very difficult, and every precaution was taken to make it as accurate as possible. An alphabetical index of occupation was prepared in Urdu on the basis of the index supplied by the Census Commissioner. The task of marking the occupation entered in the sorters' tickets of Table XVII with the group number was entrusted to one Inspector, who was placed in charge of a batch of selected compilers trained previously for this purpose. The work of the Inspectors was supervised by the Personal Assistant who was in general charge of the compilation office. When this branch of the work was finished, the group totals were transferred to the compilation sheets.

Scheme of classification.

218. The table in the margin shows the number of classes, sub-classes, orders and groups into which occupations were separated at the last four censuses. The only alterations in the classes since 1911 is that arising from the inclusion of sub-class 9 (persons living on their income) in class D instead of class C. This alteration was made after Imperial Table XVII was printed, and in consequence the figures in that table in columns 1,013 to 1,018 must be diminished by the figures in the corresponding columns 1,203 to 1,208 of sub-class 9: the corresponding columns for the totals in class D must be increased by the same figures.

	1891.	1901.	1911.	1921.
Classes	7	7	4	4
Sub-classes	..	..	12	12
Orders	24	24	55	56
Groups	478	520	169	191

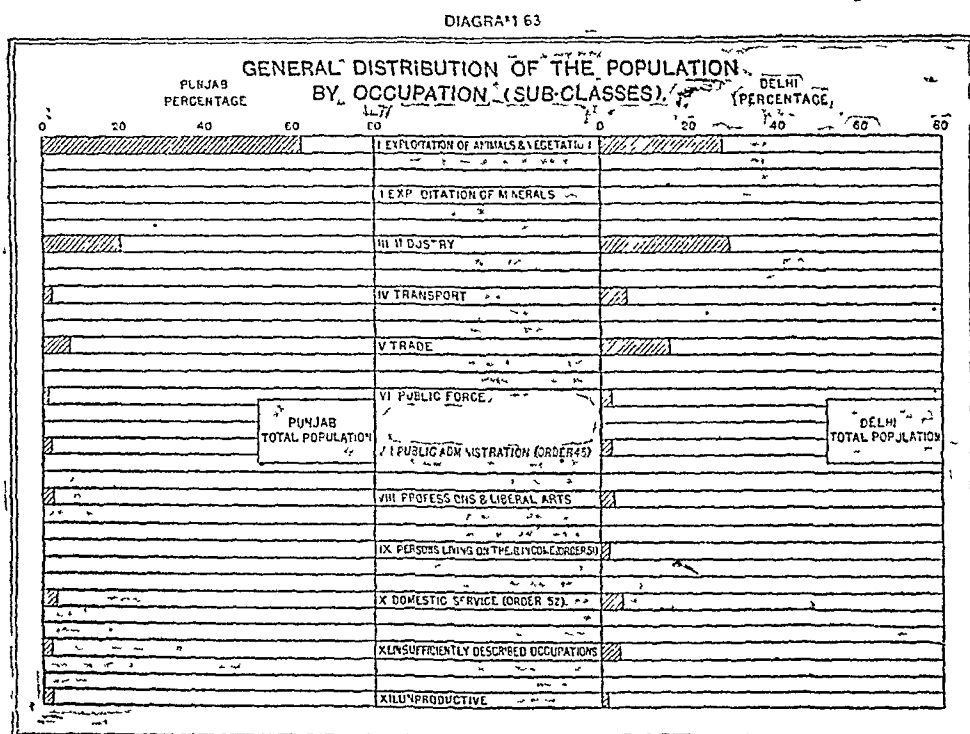
The only change in the orders is the addition of order 56 "other unclassified non-productive industries". When we come down to the groups however there is a considerable increase in their number as well as a shuffling of occupations between the groups. It is clear, therefore, that while comparison between the numbers of persons engaged in the various classes, sub-classes, and orders of occupations for the years 1911 and 1921 is feasible, it is very difficult indeed to make a comparison of the occupations in the different groups. So far as progressive changes are concerned we are not in a position to make a comparison with the conditions obtaining prior to 1911.

General distribution of occupations in the provinces.

219. The statement noted below exhibits the actual and proportional *distribution of population* of the provinces by occupational classes and sub-classes, the supported population including both actual workers and dependants.

Class and sub-class.	Punjab. Population (supported).	Punjab. No. per 1,000 of the population.	Delhi. Population (supported).	Delhi. No. per 1,000 of the population.
A.—Production of raw materials	15,213,502	606	143,050	293
I.—Exploitation of animals and vegetation	15,191,205	605	142,310	291
II.—Exploitation of minerals	22,297	1	740	2
B.—Preparation and supply of material substances	7,044,618	281	256,314	525
III.—Industry	4,834,248	193	150,766	309
IV.—Transport	487,660	19	29,926	61
V.—Trade	1,722,710	69	75,622	155
C.—Public Administration and Liberal Arts	958,411	38	35,141	72
VI.—Public force	263,269	11	9,560	20
VII.—Public Administration	158,828	6	8,742	18
VIII.—Professions and Liberal Arts	536,314	21	16,839	34
D.—Miscellaneous	1,884,529	75	53,683	110
IX.—Persons living on their income	63,915	3	4,376	9
X.—Domestic service	639,103	25	23,688	48
XI.—Insufficiently described occupations	572,934	23	19,989	41
XII.—Unproductive	608,577	24	5,630	12

The above distribution is exhibited graphically in Diagram 63 below :—



Punjab Industries.

220. From the statement and illustrative diagram the premier position which agriculture holds among the industries of the province is clearly emphasised, 60·5 per cent. of the population depending on agriculture for their means of subsistence. Out of a total of 15,213,502 persons supported by the production of raw materials no less than 15,191,205 persons are supported by the exploitation of animals and vegetation; of the persons engaged in the exploitation of animals and vegetation 99·9 per cent. depend on pasture and agriculture for their livelihood, and 0·1 per cent on fishing and hunting. The total number of workers and dependants supported by ordinary cultivation (as distinct from the growing of special products and market gardening, forestry and raising of farmstock) is 14,775,303. Over 12½ millions, or almost exactly half of the population, are ordinary cultivators ; just over 1 million, or 4 per cent., live on the incomne from

the rent of agricultural land; 2 per cent. of the population or 506,000 are farm-servants and their dependants, and 628,000 (2½ per cent.) belong to the group field-labourers and their dependants. Only 39·5 per cent. of the population depend on employment other than agriculture for their means of livelihood; of these 19 per cent. are engaged in industries of different kinds (5 per cent. in industries of dress, 4 per cent. in textile industries and the remainder in other industries). The number registered under the head Transport is 487,660 (2 per cent. of the population). Of the total population supported by transport as a means of occupation 408,333 persons (84 per cent.) are employed in transport by road and rail; trade supports nearly 7 per cent. of the population; public administration and liberal arts 3·8 per cent. The miscellaneous class accounts for 7·5 per cent. of the population. Professional beggars alone number 585,186 or nearly four times as many as public servants, civil employees and their dependants), and it actually exceeds the total number of persons (536,314) supported by all the professions and liberal arts put together.

Delhi industries.

221. The population of the Delhi Province recorded for the 1921 census was 488,188, of whom no less than 304,420 live within the limits of the municipality, the Imperial Area, old and new cantonments and civil lines, thus less than 38 per cent. of the Delhi Province lives in rural areas, and it is not therefore surprising to find that only 29 per cent. are dependent on cultivation. Industries support 31 per cent. of the population, trade 15·5 per cent., and miscellaneous occupations 11 per cent., of which domestic service accounts for 4·8 per cent., and professional beggars less than 1 per cent., compared with 2·3 per cent. of professional beggars in the Punjab. Whether this disproportion in the number of beggars in the Punjab as compared with the Delhi Province is due to the absence of charitable sentiments in the latter place, I am unable to say.

Economic Cross-cleavage of occupations.

222. National prosperity is generally measured by the value and variety of a country's material possessions, its food, and houses; by the mechanical power at its disposal, its instruments of precision in use for scientific research and for the practical arts of navigation, medicine, surgery, and warfare: by its objects of luxury and virtue, its books, its paintings, its music, its ornaments, and by its games.

Now the material resources of no country, even of such vast extent as the United States of America, provide all the requisites of modern civilisation in its highest form, and some of them have to be brought from abroad. As imports have to be paid for by exports, it is clear that unless a country has the most exceptional variety of natural resources it cannot be prosperous without exports. It is conceivable for example that America endowed as she is with coal, iron, cotton, wood, and water-power, would be fairly prosperous without exporting anything; but the Punjab, for half a century at least, is hardly likely to produce a tithe of the various articles which modern civilisation demands, and without exports would have to forego most of the benefits which modern civilisation confers on the nation which can buy outside the confines of its own borders.

Thus from the stand-point of natural welfare the various occupations may be grouped into (1) occupations concerned wholly or partially with exports, (2) occupations concerned solely in the production of articles of local consumption. It would be foolish to assert that one group is more important than the other; both groups contribute to the natural well-being: but it is the occupations that lead to export that are the safer gauge of that surplus production of wealth which every nation must secure if she is to be prosperous.

This conception leads to the economic cross-cleavage by virtue of which all occupations may be regarded as productive of an exportable surplus or not. It may be objected that theoretically there is no economic distinction between the labour of a man who grows 5 acres of wheat of which one acre is exportable surplus, and that of a man who grows tobacco for his own consumption, both add to the gross wealth of the province; but only the former adds to its net wealth, that is to its transferable capital. As it is the accumulation of capital which enables great developments in industries to proceed, the distinction appears to be valid, in spite of its resemblance to the doctrines of the Physiocratic School.

Now taking the figures for 1920-21 the value of all the articles exported from the Punjab was about 40 crores of rupees of which only 3 groups of articles supplied exports of over 1 crore of rupees, these being grains and pulses (23 crores) oilseeds (1½ crores) and raw cotton (4½ crores). Thus these three agricultural

products (food-grains, cotton and oilseeds) together provide about 75 per cent. of the total value of the provincial exports. Of the remaining 10 crores of rupees worth of annual exports, raw materials form the larger proportion. The only important articles manufactured in the Punjab which are exported are chemicals (11 lacs), leather (11 lacs), iron and steel (48 lacs) and sugar (82 lacs). Thus the province has moved but a very little way towards the preparation of its natural products for immediate human use, and we are justified, therefore, in saying that the exportable surplus, and, in consequence, the wealth of the province is dependent almost wholly on agriculture, and that without the production of that excess quantity of raw material the annual increase in the wealth of the province crores would be diminshed by nearly 35 crores of rupees. If, therefore, the Punjab is to forego the value of its exported agricultural produce, while maintaining its annual income, there would have to be a gigantic development of industrial enterprise so as to balance the loss of 30 crores or more which is annually exported from the province as raw material. Such a development seems to be out of the question during the next decade.

The Premier position of agriculture

223. It has already been noted that agriculture supports over 60 per cent. of the population of the Punjab. Of the total number (15,191,205) supported by agriculture 35 per cent. are actual workers, male and female, and a large proportion of these are peasant proprietors. But the Punjab is by no means wholly a country of peasant proprietors, and according to Mr. Calvert, there is an increasing tendency for it to become a country of petty landlords living on rent. This tendency is very marked in the figures of the last decade, as the number of persons living on income from rent of agricultural lands has increased from 626,000 in 1911 to 1,008,000 in 1921. On the other hand the numbers of farm servants and field labourers has actually decreased from 1,192,000 in 1911 to 1,134,000 in 1921. Mr. Calvert writes:—

> "I am inclined to think that the increase in rent-receivers is to a considerable extent covered by persons who are able to represent themselves as living on rent owing to the rise in prosperity. Rawalpindi and Jhelum have amassed large sums during the War; Lyallpur, Shahpur and Gujrat have amassed wealth by the rise in price of agricultural produce. The decline in labourers and the increase in the number of tenants indicate a tendency to rent the land rather than cultivate through hired labour."

Mr. Calvert estimates the number of owners of holdings of over 48 acres to be about 200,000. If we take the number of persons per family as 4·5, that is to say, equal to the number of persons per occupied house in the Punjab, the number of persons supported by the rent of agricultural lands will be about 900,000, which agrees very closely with the 886,000 shown for total workers and dependants by the census figures.

Industries other than agriculture.

224. When the importance of agriculture to the wealth of the province has been appreciated, the fact that other industries exist in the Punjab may be noted. Some of these are actually important, but the majority of them can only be regarded at present as in their infancy, and are therefore only of potential value to the province. Of the 28·1 per cent. of persons engaged in the preparation and supply of material substances just over two-thirds are engaged in industries the proportion of workers and dependants among the different industries being, as noted in the margin. Thus the most important industries at the moment are those that come under the head "industries of dress and the toilet," textiles, wood, ceramics and metal industries. Of those engaged in industries of dress and the toilet, shoe, boot and sandal makers provide no less than 51·2 per cent., while barbers, hairdressers and wig makers provide 26·1 per cent., and tailors, milliners, dress makers, darners and embroiderers of linen 12·2 per cent. Washing, cleaning and dying provides for 14·6 per cent. of persons, under this head.

Proportion of persons in different industries in the Punjab.

Textiles	21·0	per cent.
Hides, skins, and hard material from the animal kingdom	1·4	"
Wood	10·5	"
Metal	4·9	"
Ceramics	7·6	"
Chemical products	3·2	"
Food industries	4·4	"
Industries of dress and the toilet	26·4	"
Furniture industries	0·5	"
Building industries	3·3	"
other miscellaneous and undefined industries	17·0	"

The chief textile industry is that of cotton-ginning, spinning, sizing and weaving which provides for no less than 93 per cent. of persons engaged in the manufacture of textiles. The only other textile industry of present importance is that of the manufacture of rope, twine and string; but the industries of fibre preparation, wool-carding and spinning, silk-weaving and spinning, and the preparation of lace, crepe, and embroideries are all probably capable of a large amount of development, and are potentially important.

Of those engaged in wood industries, carpenters, turners and joiners provide 80·1 per cent., while basket-makers and thatchers and workers in bamboo and reeds support 17·4 per cent. of persons.

Of those engaged in ceramics the vast majority are provided by the potters and earthen-pipe and bowl-makers (79·4 per cent.) and brick and tile makers (19·4 per cent.), while there are 0·9 per cent. of persons engaged in the manufacture of glass bangles, glass beads, and necklaces and glass earstuds. The glass industry generally, which had a splendid opportunity during the war and the absence of Austrian competition, has failed to make much, if any, progress.

Of the workers in metal the vast majority are employed in the manufacture of implements and tools of iron (88·4 per cent.), while next come the workers in brass, copper and bell-metal (10·1 per cent.). Workers in other metals except precious metals (tin, zinc, lead, quicksilver, etc.) provide only 0·5 per cent. of all workers in metal. The number of goldsmiths and silversmiths has not been recorded independently and they appear under order 18, group 98, as "workers in precious stones and metals, enamellers, imitation jewellery makers, gilders, etc." As this group comprises no less than 175,696 persons, it seems likely that goldsmiths and silversmiths and their dependants exceed 100,000 in number.

The production of chemicals may be referred to as a potentially important and growing industry for which there may be a great future in the Sub-Himalayan region when the supply of electric power from the Himalayan foothills has become an accomplished fact, at anything like the cheap rate (150 rupees per kilowatt year) estimated by the experts. In particular the production of nitrates from atmospheric nitrogen may become a source of great wealth to the province. At the present moment the vast majority (94·4 per cent.) of persons engaged in chemical industries depend on the manufacture and refining of vegetable oils. The manufacture of soap, candles, lac, cutch, perfumes, and miscellaneous drugs account for 2·1 per cent., the manufacture of matches and explosive materials for 1·7 per cent., and the manufacture of aerated and mineral waters and ice 1·3 per cent. of the persons supported by the manufacture of chemical products.

225. The total number of workers and dependants under the head transport is 487,660, and these form 6·9 per cent. of those engaged in the preparation and supply of material substances. **Transport.**

Of those engaged in occupations under the sub-class transport, workers and their dependants engaged in transport by road account for just over one-half, while railway employees account for one-third, the remaining one-sixth being made up of workers and their dependants engaged in transport by air (0·1 per cent.), transport by water (11·8 per cent.), and workers and their dependants in the post office, telegraph and telephone services (4·4 per cent.). Of those engaged in providing transport by road the major portion are owners and drivers of camels, mules, asses and bullocks, who form 64·3 per cent. of all transport workers. The owners, managers and employees of country-carts and other vehicles account for 13·0 per cent. of transport workers.

226. The sub-class trade includes 22·4 per cent. of the workers and their dependants engaged in the preparation and supply of material substances, and occupations under this sub-class are divided into 17 orders and 34 groups. The largest order is that of "other trades in food-stuffs" which covers the large number of retail shopkeepers of oil, salt, fruit and vegetable sellers, grain, pulse, and tobacco sellers, and dealers in sheep, goats and pigs, hay, grass and fodder. In the present census the ordinary *nun-tel-seller* has been included under the order "other trades in food-stuffs," whereas in 1911 he did not appear under this head, so that the number of workers and dependants of the petty shopkeeper type appears to have increased from 5,248 in 1911 to 675,477 in 1921. Actually we must look to group 135 of the 1911 census to find the data for the numbers of petty food-sellers under the head "shopkeepers otherwise unspecified". As these were found to number 676,945 in 1911, the *un-tel-seller* would not appear to be thriving. But the two census figures are not strictly comparable. **Trade.**

After the petty shopkeeper the most important trader is without doubt the money-lender. The term *bania* which is the ordinary equivalent for money-lender covers a much wider range of occupations than mere money-lending. According to the classification adopted at the present census, bank-managers, money-lenders, exchange and insurance agents, money-changers and brokers and their employees form a single group comprising 9·3 per cent. of those engaged in trade, while group 122 includes brokers, commission agents, commercial travellers, warehouse owners and their employees accounting for 1·5 per cent. persons engaged in trade. The variation in the numbers of money-lenders is examined in paragraph 237 below. After money-lending, trade in textiles occupies the most important position finding support for 7·5 per cent. of those engaged in trade. In addition, trade in skins, leather and furs supports 1·5 per cent. of those engaged in trade, and trade in wood 1·2 per cent. Trade in chemical products includes the preparation and sale of drugs, dyes, paints, petroleum, explosives, etc.

Trade in clothing and toilet articles furnishes support for 1·4 per cent. of those engaged in trade, while dealers and hirers in mechanical transport, motors, cycles, carriages, carts, boats, elephants, camels, horses, cattle, asses and mules, form 3·8 per cent. of all traders. Less than 1 per cent. of all traders are engaged in trade in metals, pottery, bricks and tiles, trade in building materials occupies 0·1 per cent. and dealers in fuel form 0·4 per cent. Traders of other sorts form 15·5 per cent. of the transport workers, and these are mainly general shopkeepers and shopkeepers otherwise unspecified.

Public administration and liberal arts.

227. These occupations provide for the support of only 4·1 per cent. of the population, divided among the army and police (25·8 per cent.), public administration (15·5 per cent.), professions and liberal arts (52·3 per cent.) and persons living on their income (6·3 per cent.), Thus only just over 1 per cent. of the population is engaged on the protection of the province from external aggression and in the maintenance of internal law and order. These numbers can certainly not be said to be excessive. The total Imperial Army at the last census is given to be 74,614, which is only 0·36 per cent. of the population of British Territory, while the army of Indian States includes 9,515 males which is only 0·22 per cent. of their population. The total police force of the province, including village watchmen, is 27,357 for British Territory and 5,697 for the Punjab States, which is only 0·13 per cent. of the population both for British Territory and the Punjab States. Including village watchmen the actual numbers in the police were 33,054 which is less than 1 policeman for every 4 square miles of British Territory. In view of this and the preceding figures it can hardly be argued that the Punjab is over-policed.

The professions and liberal arts support 536,314 persons, or just over 2 per cent. of the total population.

Of those supported by the professions and liberal arts, religion accounts for 16·8 per cent., law 3·4 per cent., medicine 8·6 per cent., instruction 10·3 per cent., and letters and arts and sciences 16·7 per cent. The strong appeal which religious sentiment has for the most of people in the Punjab is well emphasised by these figures ; indeed for the most part the people seem to prefer vicarious to personal religious exercises and observances. This conclusion must not be interpreted as implying an absence of deep religious feeling ; on the contrary there are undoubtedly many devout and orthodox Hindus, Musalmans, Sikhs and Christians to whom religion means something more than mere adherence to dogma ; but it is unquestionably true that religion is not merely symbolised by the idol, the prayer or the priest but *is* the religion itself in the eyes of the vast majority.

The number of lawyers of all kinds including Kazis, law agents and Mukhtiars is 2,477 actual workers or just under 1 for every 10,000 inhabitants of the Punjab. This does not seem an unduly large number and it is to his prominence in the educated and political life of the community rather than to his numerical strength that the lawyer owes his apparent ubiquity.

Medicine accounts for 8·6 per cent. of the persons supported by public administration and liberal arts. This includes medical practitioners of all kinds, dentists, occulists, and veterinary surgeons, midwives, vaccinators, compounders, nurses, masseurs, etc.

Instruction accounts for the support of 10·3 per cent. of the persons engaged in the professions and liberal arts, school teachers forming a greater proportion of these.

The letters and arts and sciences support 89,516 workers and dependants. This would seem to be a satisfactory state of affairs until it is observed that 68·2 per cent. of these persons are music composers and masters, players on all kinds of musical instruments, singers, actors and dancers; while no less than 17·2 per cent. are conjurors, acrobats, fortune-tellers, and the like. The actual number of well-educated persons engaged in the pursuit of letters and arts and sciences is small, and is included in the groups 176 (architects, surveyors, engineers, and their employees) and 177 (authors, editors, journalists, artists, photographers, sculptors, astronomers, meteorologists, botanists, astrologers, etc.). These two groups together supply 4,350 male and 108 female workers. There are scarcely 20 research workers in the Punjab, so great is the neglect of the advancement of knowledge in the province.

228. The miscellaneous occupations of the province suffice for the support of 7·2 per cent. of the population, pretty equally divided between domestic service, insufficiently described occupations, and unproductive occupations. Domestic service need not be enlarged on, but among the insufficiently described occupations there are a certain number of persons who should be shown under the sub-class of trade or industry. The vast majority of this sub-class is provided by 'labourers and workmen otherwise unspecified' (group 187). **Miscellaneous occupations.**

Of the unproductive occupations, inmates of jails, asylums and hospitals form 2·6 per cent., while beggars, vagrants and prostitutes account for the remaining 97·4 per cent.

If we add to the unproductive persons (2·4 per cent. of the population) the numbers of persons living on their incomes we find that only 2·7 per cent. of the population are not contributing to the national income or are not dependants of those who do contribute. On the whole, therefore, the Punjab may be regarded as a nation of workers.

Section II.—Local Distribution of occupations.

229. In this section it is proposed to examine the local distribution of a few of the more important occupations of the Punjab, namely, of agriculture, industry as represented by a few specified groups of occupations, trade, the distribution of the money-lending class, of priests and ministers, and finally of the unproductive group of beggars, vagrants, witches and wizards. Diagrams based on the percentage of persons supported by each of these industries were prepared from the tahsil figures of occupations, and the isopleths were drawn. Unfortunately the exigencies of time and economy prevent their reproduction, and a verbal description must suffice. **Introductory**

230. As is well-known agriculture is a universally prevalent occupation, and only in one tahsil in the Punjab, that of Lahore, is less than one-third of the population supported by agriculture. Between Lahore 25 per cent. and Kulu 93 per cent. there is, however, a considerable diversity in the percentage of persons supported by agriculture. The regions in which the percentage is below average are those which are favourable to industry and trade; the tahsils in which reside the greatest percentage of persons supported by agriculture are in those zones where no alternative occupation is possible, namely, in the Sub-Himalayan region and in the tracts lying outside the area of perennial canal irrigation. If in fact we exclude the Sub-Himalayan Area the apparently anomalous conclusion is reached that the area which is most favourable to agriculture has the smallest proportion of persons engaged in this pursuit, while the unwatered deserts of the South-East Punjab, Dera Ghazi Khan and the Thall support a very high percentage of persons by agriculture. **Local distribution of agriculture.**

The explanation is simple. Agriculture is the primitive industry of the Punjab, and in those areas in which agriculture flourished in the past trade sprang up, roads were built, and there resulted that surplus of wealth which has always formed the loadstone of ability and enterprise. Where agriculture flourished industries have most readily flourished too. Put in other words we may say that surplus wealth is essential for industrial development, and each country can most readily obtain a surplus of wealth by following the path which its natural resources makes easiest. In future years, as in the past, the prosperity of Punjab industries is likely to depend on the prosperity of the basic occupation of agriculture.

A very notable area in which there is a high percentage of agricultural occupation, in spite of the fact, that it is well served by perennial irrigation is the Lower Bari Doab Colony, the explanation being of course that this colony is of recent development, and though many mandis and cotton-ginning factories have been set up, agriculture still supports more than 60 per cent. of the population. It would not be surprising if 10 years hence the number of persons supported by agriculture in the Lower Bari Doab Colony is less than 60 per cent., and approaching the 55 per cent. which obtains in the Lyallpur and Chiniot tahsils of the Lower Chenab Colony.

The same tendency is bound to be perceptible in the Ferozepore district and the Bahawalpur State where the extension of irrigation from the Sutlej Valley Project will be an accomplished fact in the near future. The 68 per cent. and 69 per cent. of persons engaged in agriculture in the Fazilka and Muktsar tahsils, respectively, cannot fail to be very much reduced before long by the influence of perennial irrigation. To sum up, therefore, we may say that canal irrigation draws people away from agriculture toward trade and industry. Paradoxical as it may seem the Punjab Canals are the chief industrialising agents of the province.

Local distribution of industries.

231. The groups named in the margin have been selected as representative of the industries of the Punjab. The groups support 2,144,379 persons, being 8·2 per cent. of the total population and being over 44 per cent. of the persons engaged in all industries. The local distribution stands out very clearly on the map as a T-shaped distribution, the head of the T stretching along the North-Western Railway from Rawalpindi to Ambala and the leg of the T down the Lyallpur Colony. As has been remarked in the previous paragraph, Punjab industries are flourishing in just those areas where agriculture flourishes and where good railway communications have been developed as a matter of course.

Group.	Total workers and dependants.
25. Cotton-ginning, cleaning and pressing	91,886
26. Cotton-spinning ..	108,201
27. Cotton-sizing and weaving ..	756,001
44. Carpenters, turners and joiners, etc.	407,267
48. Other workers in iron and makers of implements and tools, principally or exclusively of iron ..	211,486
55. Potter and earthen pipe and bowl-makers.	293,143
81. Barbers, hair-dressers and wig-makers	276,005
Total ..	2,144,379

Local distribution of trade.

232. The occupations specified in the 4 groups named in the margin, have been selected as representing the chief occupations under this sub-class. These occupations furnish a total of 1,221,109 persons, being 4·7 per cent. of the total population, and just over 71 per cent. of the persons engaged in trade. The local distribution is curious. The area in which over 5 per cent. of the population is engaged in trade covers about one-third of the Punjab, and forms in addition to a solid block of parts of the districts of Rawalpindi, Jhelum, Sialkot, Gujrat, Gujranwala, Shahpur, Lyallpur, Mianwali, Multan, Muzaffargarh, Montgomery and Jhang, several isolated places like Pathankot, Amritsar, Dipalpur, Ludhiana, and Bhiwani, together with a narrow stretch of territory between Ambala and Sonepat along the Ambala-Delhi Chord Railway.

Group.	Total workers and dependants.
121. Banks, establishments of credit, exchange and insurance (bank managers, money-lenders, exchange and insurance agents, money changers, and brokers and their employees)	161,486
123. Trade in textiles (trade in piece-goods, wool, cotton, silk, hair, and other textiles)	130,020
132. Grocers and sellers of vegetable oil, salt and other condiments	675,477
152. General store-keepers and shop-keepers otherwise unspecified ..	254,126
Total ...	1,221,109

Of the castes which are engaged extensively in trade, the Aggarwal (79·1 per cent.), Arora (65·1 per cent.), Khatri (58·0 per cent.) are Hindu and the Khoja (50·2 per cent.) alone is a Musalman caste ; so trade is a distinctively Hindu occupation, and it is not, therefore, surprising to find the greatest proportion of traders in the North-West Dry Area where Musalmans predominate. In the rest of the province where Hindus and Sikhs are more numerous than Musalmans the trading instinct of the Hindus is of smaller commercial value.

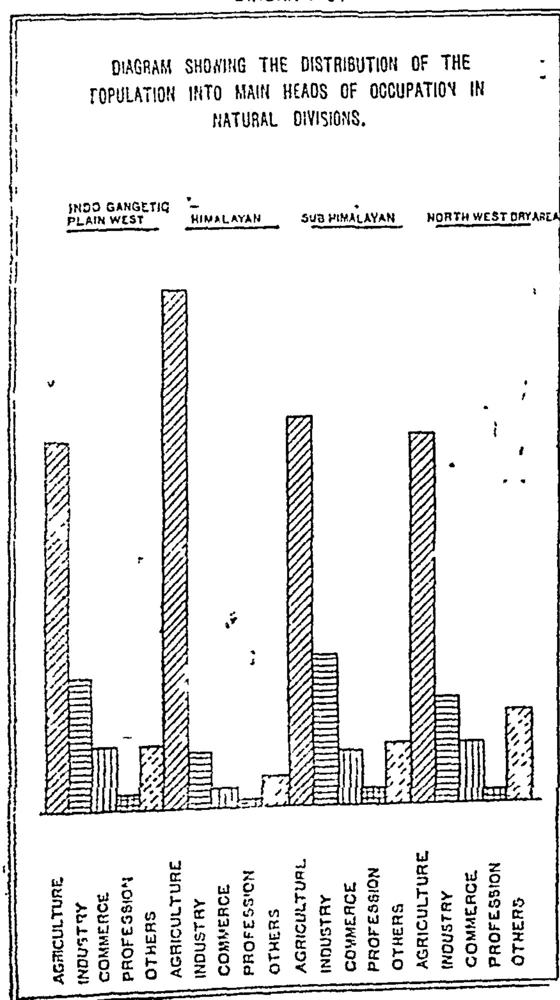
233. The Sub-Himalayan Area contains the greatest proportion of priests and ministers, under which head are classed Sadhus, Parohats, Mahants, Mullahs or Maulvis, Mujawars and Fakirs and others, these being more than 20 *per mille* of the total population in Daska, Zaffarwal Pasrur and Raya of the Sialkot district, and in Pathankot and Shakargarh of the Gurdaspur district, and also in the tahsils of Hoshiarpur, Una, Garhshankar of the Hoshiarpur district, Samrala of the Ludhiana district, Naraingarh of the Ambala district. and Hamirpur of the Kangra district. Most of the Central Punjab contains between 10 and 20 priests and ministers *per mille* of population. while a very large tract of land in the North-West Dry Area and in the South-East contains less than 10 priests and ministers *per mille* of population. Thus priests and ministers prefer the old settled districts to the colony areas. but are showing a tendency to migrate towards the latter. Priests and ministers as a class may be said to avoid areas in which famines were prevalent in the past and where scarcity of food may sometimes obtain even under present conditions. **Local distribution of priests and ministers.**

234. The total number of persons under group 189 is 590,514. of whom the actual workers are 208.784 males and 41,631 females. The profession of begging is one that apparently can be adopted at an early age, and it seems probable that the number of actual workers must exceed the number of dependants although this is contrary to the figures given by the census report. The local distribution of beggars corresponds very closely with what we know of the distribution of material wealth in the Punjab, the canal colonies showing the largest proportion of beggars and the South-East. extreme North. and the Himalayan region the smallest proportions. **Local distribution of beggars, vagrants, witches and wizards.**

The general agreement between the ascertained local distribution of occupations and the distribution that might be anticipated *a priori* is evidence of the general relative accuracy of the occupational tables. In other words the amount of misclassification of occupations which occurs in the tables is probably roughly proportionate to the total population of each district or tahsil. The extent of systematic misclassification, however, cannot be determined from the consideration of the local distribution.

235. The main features of the distribution of population by main heads of occupations is shown in the accompanying diagram which shows for each of the natural divisions the relative number of persons engaged in agriculture, industry, commerce, professions and other occupations. As already noted in paragraph 230 agriculture provides a relatively large proportion of occupations in the Himalayan region; industry flourishes in the Sub-Himalayan tract; trade is very strongly represented in the North-West Dry Area; while professions are most common in the Sub-Himalayan and Indo-Gangetic Plain West and are least important in the Himalayan tract. **Distribution by natural divisions.**

DIAGRAM 64



Section III.—Comparison with Previous Censuses.

Difficulties of comparison.

236. It has already been pointed out in paragraph 218 that an entirely new scheme of classification was introduced in 1911, 4 classes and 12 sub-classes replacing the 7 classes of 1901, the number of orders being increased from 24 to 155 and the number of groups reduced from 520 to 169. In spite of the complete change of classification an attempt was made at the last census to compare the number of persons supported for each group in 1901 and 1911, and the results are shown in Subsidiary Table VII of Chapter XII of the 1911 census. This table shows more conclusively than any amount of argument, how impossible it is to trace the variation of persons engaged in different occupations at two epochs if there has been any change in classification. If we were to accept Subsidiary Table VII of the 1911 Census at its face value the only conclusion would be that within the 4 major classes of occupation Punjab labour and industry was most remarkably fickle and volatile. Nothing could be further from the truth, as it is well known that it is the hardest thing in the world for a Punjabi to break loose from the bonds of his traditional occupation. Some alteration in the numbers of persons engaged in the occupational groups would be expected during the course of a decade, but it is quite impossible that variations of the extent noted in the margin can be genuine. The figures chosen are not selected for their particularly high percentage of variation, and prove simply that comparison by groups from one census to another, where the groups have been altered in any way, is out of the question.

Table showing change in occupation between 1901 and 1911 from the Subsidiary Table VII of Chapter XII, Census 1911.

1. Income from rent of agricultural land ..	—9	per cent.
2. Ordinary cultivators ..	+168·6	„
3. Agents, managers of landed estates (not planters), clerks and collectors, etc. ..	+730·9	„
4. Farm servants and field labourers ..	+174·9	„
6. Tea, coffee, cinchona, rubber and indigo plantations ..	—88·7	„
7. Fruit, flower, vegetable, betel, vine, arecanut, etc., growers	+15·8	„
8. Wood cutters, etc. ..	+165·1	„

The difficulty exists, even if in a slightly less pronounced form, in comparing the 1911 figures with those of 1921, and the marginal table which gives the proportional distribution of the population of the provinces under the main heads of occupation, and the percentage variation during the decade must not be regarded as exact. The increase of the number of persons supported by the production of raw material, namely, 5·6 per cent. agrees closely with the increase of the total population. Most of the other changes are somewhat dubious. For example, the strength of sub-class 2, exploitation of minerals, has declined from 36,132 to 23,037. The decrease is undoubtedly due to increasing vagueness in the description of occupation, and this is borne out by the great increase in the numbers under sub-class 11 "insufficiently described occupations" in which the number of persons has increased by 124 per cent. Nor does the number of persons (3,427) employed in mines as determined at the Special Industrial Census, taken only 2 months after the general Census, tally with the figures of the Census itself, for which the numbers of actual workers are shown in the margin. Then again the falling off occurring in the number of transport workers is inexplicable except on the

Class and sub-class.	Population supported per 1,000 of the total population in 1911.	1921.	Variation per cent. in strength since 1911.
A.—PRODUCTION OF RAW MATERIAL ..	601	600	+5·6
I.—Exploitation of animals and vegetation.	600	599	+5·7
II.—Exploitation of minerals ..	1	1	—36·2
B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	298	285	+1·7
III.—Industry	203	195	+1·4
IV.—Transport	30	20	—27·0
V.—Trade	65	70	+15·6
C.—PUBLIC ADMINISTRATION AND LIBERAL ARTS.	42	39	—4·4
VI.—Public Force	11	11	+2·7
VII.—Public administration ..	6	6	+11·1
VIII.—Professions and liberal arts	25	22	—11·2
D.—MISCELLANEOUS	59	76	+35·5
IX.—Persons living on their income	2	3	+15·8
X.—Domestic service	21	26	+30·5
XI.—Insufficiently described occupations.	11	23	+124·1
XII.—Unproductive	25	24	+2·5

Group.	Actual workers (males).
19. Coal mines	1,107
21. Mines and metallic minerals (gold, iron, manganese, etc.)	4
22. Other minerals (jade, diamonds, limestone, etc.)	3,565
23. Rock, sea and marsh salt	688
24. Extraction of saltpetre, alum, and other substances soluble in water ..	3,167
Total	8,531

assumption that a certain number of persons engaged in that occupation have now preferred to describe themselves as traders, in which the percentage variation in strength is + 15·6 per cent.

Change in the number and distribution of money-lenders.

237. Partly as illustrative of the foregoing arguments, but mainly because of its own intrinsic interest, a comparison between the number of money-lenders in different districts at the last 2 censuses has been attempted.

In 1911 money-lenders were included together with bank managers, exchange and insurance agents, money-changers, brokers, etc., in group 106 while in 1921 they are included in group 121 which comprises also bank managers, exchange and insurance agents, money-changers and brokers and their dependants. In 1911 the total number of workers and their dependants was 193,890 as compared with 166,960 in 1921, from which one might conclude that the number of money-lenders has very much decreased during the last decade. The possibility, however, suggests itself that some money-lenders (who will usually describe themselves as "banias," have been entered under group 107 (brokers, commission agents, commercial travellers, warehouse owners and employees) in 1911, corresponding with group 122 in 1921. Comparing these two groups we find an increase of 10·3 per cent. The safest course, therefore, to adopt is to add together groups 106 and 107 in 1911 and compare it with sum of the groups 121 and 122 in 1921. The sum of the two groups shows a decrease of 10·4 per cent., and there is a strong probability, therefore, that the number of money-lenders in the Punjab has decreased during the 10 years 1911-1921.

If we study the local distribution of this decrease in different parts of the Punjab we find that most of the province has shared in it, the only districts in which there is an increase of over 10 per cent. being Rawalpindi, Lahore, Ferozepore, Hissar, Karnal and Rohtak and the States of Kalsia, Nahan and Nabha. The greatest increases of all (over 50 per cent.) are shown by the districts of Hissar and Rohtak. Mr. Calvert believes that the growth of the Co-operative Credit Societies in the Central Punjab has driven the money-lenders away towards the canal colonies. That the money-lender is disappearing from Hoshiarpur, Jullundur where the number of Co-operative Credit Societies is largest is undoubted, but the Census evidence, so far as it goes, shows that the money-lender prefers to migrate to the South-East Punjab rather than to the colonies. The districts of Lahore and Ferozepore show a marked increase in the number of money-lenders in spite of the fact that there are over 300 Credit Societies in both these districts. On the other hand the number of money-lenders has decreased very much during the last decade in the districts of Dera Ghazi Khan, Muzaffargarh and Multan where the growth of the co-operative movement is less rapid than in most parts of the Punjab.

Summary of changes since 1911.

238. To sum up, there has been very little change in the main occupations of the province during the decade and the observed variations are probably almost entirely due to errors of classification. Thus agriculture then, as now, supported just over 60 per cent. of the population. The persons engaged in the preparation and supply of material substances has nominally fallen from 29·7 per cent. to 28·1 per cent.: the persons engaged in public administration and liberal arts has diminished from 4·5 per cent. to 4·1 per cent.: while the miscellaneous class has increased from 5·7 per cent. to 7·2 per cent. The only conclusion we can draw from these figures is that there has been no significant change in the occupations of the province. The same conclusion applies to most of the occupations under the different orders, though, here and there, there may be a significant change: for example, the percentage of persons engaged in the perparation of chemical products out of those engaged in industry has risen from 2·6 per cent. to 3·2 per cent. The percentage engaged in the industries of dress and toilet from 23·3 per cent. to 26·4 per cent. of those engaged in industries. The diminution in the number of those engaged in general transport and in transport by road, in particular, has already been commented on, and possibly is a real decrease off-set by the increase in transport by rail from 21·0 per cent. of all transport workers in 1911 to 33·2 per cent. in 1921. Under the head "trade" the *nun-tel-seller* is the disturbing element, and the difficulties of classifying him prevent any detailed comparison under the different occupational orders of this sub-class. Under "public administration and liberal arts" the proportionate number engaged in "public administration" has increased from 14·0 per cent. to 15·5 per cent., and this is doubtless

a real increase, as also is the increase in the number of those engaged in instruction from 6·7 per cent. to 10·3 per cent. Finally the increase in the miscellaneous class from 5·7 per cent. to 7·2 per cent. of the population is due to the greater use of the sub-class "insufficiently described occupations" in which are put all doubtful cases.

Thus the census figures alone throw but little light on present day industrial tendencies.

Section IV.—Occupations by Caste and Female Occupations.

Principal occupation of each caste.

239. The statistics of occupation of selected castes, tribes, or races are given in Imperial Table XXI, and this discriminates between the religion and locality dealt with; while Subsidiary Table VIII shows the proportion of persons in each caste dependent on the various forms of occupation for a livelihood, and also the percentage of the number of female workers to male workers. Of the 80 castes, races and tribes examined cultivation of all kinds is the principal occupation of 32 castes. Only one caste has, as its principal occupation field-labour and wood-cutting, and that is the Chuhra Sikh, of whom 34·8 per cent. are engaged in these occupations. The castes whose principal occupation is that of artisans or workmen are shown in the margin. The trading castes are the Aggarwal Hindu, of whom 79·1 per cent. are engaged in trade; the Arora Hindu and Sikh of whom 65·1 per cent. and 63·1 per cent. are engaged in trade; the Khatri, Hindu and Sikh of whom 58·0 per cent. and 45·9 per cent. are engaged in trade, and the Khoja of whom 50·2 per cent. are engaged in trade. The marginally noted castes have more than 1 per cent. of their numbers in public service.

Percentage of persons of each caste who are artisans or workmen.

Barwala (Musalman) ..	34·8	Kumhar (Musalman) ..	63·2
Chamar (Hindu) ..	48·2	Lohar (Hindu) ..	53·8
„ (Sikh) ..	51·0	„ (Musalman) ..	71·3
Chhimba (Hindu) ..	69·5	Mussalli	41·8
„ (Sikh) ..	58·3	Nai (Hindu) ..	75·2
„ (Musalman) ..	61·5	„ (Sikh) ..	66·2
Chuhra (Hindu) ..	67·7	„ (Musalman) ..	80·2
„ (Sikh) ..	31·8	Qassab „ ..	48·4
Dhanak (Hindu) ..	35·3	Sunar (Hindu) ..	85·1
Dhobi (Musalman) ..	74·0	„ (Musalman) ..	47·7
Julaha (Hindu) ..	46·3	Tarkhan (Hindu) ..	61·1
„ (Musalman) ..	78·2	„ (Sikh) ..	61·0
Kashmiri „ ..	54·7	„ (Musalman) ..	72·5
Kumhar (Hindu) ..	53·9	Teli „ ..	56·3

Percentage of persons of each caste in public service.

Aggarwal (Hindu)	..1·3 per cent.
Arora (Hindu)	..2·1 per cent.
Arora (Sikh)	..2 per cent.
Brahman (Hindu)	..1·9 per cent.
Khatri (Hindu)	..4·7 per cent.
Khatri (Sikh)	..4·0 per cent.
Mughal (Musalman)	..2·0 per cent.
Pathan (Musalman)	..2·9 per cent.
Qureshi (Musalman)	..2·6 per cent.
Sayad (Musalman)	. 3·3 per cent.
Sheikh (Musalman)	..3·6 per cent.

4·6 per cent. of Europeans and 11·8 per cent. of Anglo-Indians have occupations in public administration. Of the castes which have a certain number of persons who live on their income, the Aggarwal Hindu, Sikh Arora, the Khatri both Hindu and Sikh, and Anglo-Indians are the most prominent.

Domestic service is the principal occupation of the Barwala and Jhiwar. Begging or criminal occupations are the chief means of livelihood of the Bharai, the Fakir, the Harni, the Mirasi, the Pakhiwara and the Sansi.

The highest percentage of persons engaged in some of the chief occupations are noted in the margin.

Occupation.	Caste which has the greatest percentage of persons engaged in that occupation.	Percentage of persons engaged in the occupation.
Cultivation of all kinds ..	Meo ..	97·0
Raising of livestock ..	Sansi ..	9·9
Field labourers and wood cutters.	Sikh Chuhras ..	34·8
Industries ..	Sunar Musalman ..	87·7
Transport ..	Anglo-Indians ..	44·8
Trade ..	Aggarwal Hindu ..	79·1
Public Force ..	Europeans ..	80·5
Public Administration ..	Armenians ..	25·0
Religion ..	Sayad ..	38·4
Domestic Service ..	Jhiwar Sikh ..	78·9
Beggars, prostitutes, criminals, inmates of jails and asylums.	Mirasi ..	76·6

Occupations of women.

240. Statistics of the actual number and proportion of male and female workers in selected orders and groups are given in Subsidiary Table VI separately for the Punjab and Delhi provinces. The orders and groups selected are those in which female workers exceed 100 *per mille* of their total population or in which the proportion of female workers to male workers is high.

In the Punjab 11 per cent. and in Delhi 10 per cent. of the persons returned as actual workers were women. 58 males out of every 100 are actual workers in both the provinces, while the corresponding percentage among females is 9. The list of occupations in which female workers are specially numerous in the Punjab is given below :—

Group.	Occupation.	Number of females per 1,000 male workers.
6	Tea, coffee, cinchona, rubber and indigo plantations	324
15	Bird, bees, etc.	429
21	Mines and metallic minerals (gold, iron, manganese, etc.)	750
26	Cotton-spinning	9,686
29	Rope, twine, and string	296
31	Wool carding and spinning	1,244
38	Lace, crepe, embroideries, fringes, etc., and insufficiently described textile industries..	1,616
65	Rice pounders and huskers and flour grinders	2,356
66	Bakers and biscuit makers	409
67	Grain parchers, etc.	1,225
76	Hat, cap and turban makers	1,046
87	Stone cutters and dressers	462
101	Others, including managers, persons (other than performers) employed in theatres and other places of public entertainment, employees of public societies, race course service, huntsmen, etc.	307
102	Contractors for the disposal of refuse dust, etc.	863
103	Sweepers, scavengers, etc.	667
135	Cardamom, betel-leaf, vegetables, fruit and arecanut sellers	350
139	Dealers in hay, grass and fodder	458
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	1,516
190	Procurers and prostitutes	8,946

There are certain occupations in which women considerably outnumber men, as for example cotton-spinning, rice-pounding and flour-grinding, and grain-parching.

In connection with the relative paucity of female workers in the ranks of actual workers found in both the provinces, the remarks made by Mr. Calvert in his book "Wealth and Welfare of the Punjab," are very suggestive. In discussing the economic causes of Punjab poverty he writes :—

> "There is a vast waste of female labour, due primarily to custom and prejudice. In most other countries the proportion of female labour to the whole is high; while its efficiency is equal to the tasks performed; the contribution to the national dividend resulting from this forms an appreciable part of the whole. If there were in Western countries a movement aiming at the exclusion of female labour from all except purely domestic tasks, that movement would endanger the whole economic fabric, and, if successful, would involve those countries in ruin. The Punjab discards what in England and elsewhere is an absolutely necessary element in the maintenance of their civilisation. The fact that there are tribes, such as Brahmans and Rajputs, which do not allow their womenfolk even to work in the fields is alone sufficient to explain their poverty. The work of women as clerks, shopkeepers, post and telegraph operators, factory hands, etc., and in connection with the fish industry, market garden, pit-tops, etc., has no counterpart here. In the course of generations the loss from this waste alone must have made material progress almost impossible. No European country could maintain its present standard of living without the assistance derived from female labour."

I suspect, however, that a very large part of the apparent want of employment of female labour arises from the fact that the classification of occupations was drawn up by men and not by women ; many women appear as unemployed when they should be classed as actual workers engaged in domestic duties, in cooking, grinding of grain, drawing water from wells, taking food to their families in the field, preparing and mending clothes, and last but certainly not least in child-bearing. In fact the occupational tables will have to be completely revised before a fair comparison of the extent of male and female occupations can be drawn.

Section V.—The Industrial Census.

Nature of the Statistics

241. The statistics relating to the number and type of industrial establishments and the employees therein are embodied in Imperial Table XXII. The data were based on the information supplied on two special schedules filled up by the owners or managers of all concerns in which at least 10 persons were employed on any normal working day between the 14th March and 14th May 1921. Schedule A included descriptions of the mine, factory or other industrial establishment, the nature of the article produced in it, the nature of the ownership and the number, sex, race or nationality of the owners or directors and of the managers, supervisors and clerical staff, the number and nature of the power engines, state of the industry, whether perennial or seasonal, and the number of looms in actual operation in textile establishments. Schedule B was used for recording the caste, race and birth-place of skilled and unskilled labourers together with their occupations. The detailed instructions for filling in various columns of the schedule were as follows :—

SCHEDULE A.—

Column 1.—State what the nature of the establishment is, *e. g.*, jute-press, jute mill, woollen carpet, weaving factory, glass works, etc.

Column 2.—A general description only is required of the principal commodity manufactured, *e. g.*, coal, cotton, goods, glass-goods, vegetable oil, etc.

Column 3.—Where any important bye-product is manufactured which has a distinct commercial value this should be entered in this column, *e. g.*, coke, or coal gas. If the same establishment turns out several distinct classes of goods or one class of goods at one season and another at another season, the most profitable should be entered in column 2 and the other or others in column 3.

Column 4.—Ownership.—State whether the establishment is owned by (*a*) Government, (*b*) a local authority (*i. e.*, municipality, port trust, etc.), (*c*) a registered company, (*d*) is privately owned. If a registered company state the name under which it is registered.

Column 5.—Number, sex and race or nationality of directors or owners.

(*a*) This column will be blank in the case of establishments owned by Government or a local authority.

(*b*) Give the total number of directors or owners. Enter the number of British or Anglo-Indians. In the case of others give the nationality of Europeans and foreigners, *e. g.*, American, Swiss, Chinese, etc. For Indians state whether, Hindu, Sikh, Mohammadan or "others." In the case of foreigners who are British subject enter the letter B in brackets after the nationality. Give separate figures for females, if any.

Specimen entry.—Directors total 10, one British, one Anglo-Indian, one Swiss (B), one American, two Mohammadans, one Parsi, three Hindus.

Column 6.—Race or Nationality of Manager.—Enter as in the preceding column. If a female, state this.

Column 7.—For supervising and technical staff the number by sex and race.—This heading will include assistant manager, heads of departments and sections, inspectors, engineers, special technical experts and advisers, etc. It should not include Foreman, Mates or Mukkaddams who are of the same general class as the operatives.

Column 8.— Clerical Staff—Enter the particulars for all persons employed on clerical work in the establishment, such as clerks, accountants, writers, copyist, etc.

Column 9.—Number and nature of power engines with horse power—

(1) In the case of power engines other than electric generators or motors enter how many engines of each class (steam, oil, etc.), there are in use and the horse-power of each engine, *e. g.*, three steam—one 25 horse-power and two 20 horse-power: four oil—three 15 horse-power and one 10 horse-power, etc.

(2) Electric power is either (*a*) generated on the premises by steam, water or oil primemovers, or (*b*) supplied from outside by agreement. In the case of (*a*) enter (i) how many (steam oil, etc.), primemovers there are in use and the horse-power of each and, (ii) how many electric dynamos there are in use and the power (in Kilowatts) of each.

In the case of (*b*) enter how many electric motors are installed and their total horse-power.

Column 10.—State of Industry.—Enter whether the establishment works—

(*a*) throughout the year, or

(*b*) during a part of the year only.

In the case of (*b*) state the months during which or during part of which the establishment works or is likely to work in the census year.

Column 11.—Number of looms.—To be filled up in the case of cotton, silk, woollen or jute mills and establishments only.

SCHEDULE B.—

Column 1.—Enter the name of each person;

Column 2.—Enter the sex, male or female.

Column 3.—Adult means 14 years or over; child means under 14 years. In the case of children, enter the actual age in years after the word "child."

Column 4.—Ask each person what his caste is and enter what he says if he gives an intelligent answer. If he says Mohammadan, Parsi, Sikh, enter this. If he says Hindu ask him his caste Brahman, Koshla, Chamar, etc., and enter it. If he is an aboriginal he should give the name of his tribe Gond, Kol, etc. If he is an Anglo-Indian or Indian Christian enter this. If he is a foreigner enter his nationality, *e.g.*, Chinese.

Column 5.—Enter the district or State in which he was born and if the district or State is outside the province of enumeration enter also in brackets the province or agency. If a foreigner, enter his country.

Example.—Jullundur, Lahore, Howrah, (Bengal), Mirzapur (United Provinces), China, Jaipur State (Rajputana).

Column 6.—Enter skilled for those who are employed on works requiring special technical skill and training and are paid above the rates for unskilled labour. For the rest leave blank.

Column 7.—Enter their actual personal occupation in the establishment at the time in the case of skilled operatives only, *e. g.*, fitter, cotton-weaver, engine-driver, carpenter, etc.

The statistics of the Industrial Census are probably fairly reliable as the information was supplied by the owners or managers themselves, but a comparison of the annual report on Factories 1921, with Census Table XXII shows that 21 registered factories were omitted from the census record. The list is given below:—

District.	Number of Establishments.	Description.	Average daily number of persons employed.
		GOVERNMENT AND LOCAL FUND FACTORIES.	
Ferozepore ..	1	Arsenal	1,698
Lahore ..	1	Aeroplane workshop	216
Lahore ..	1	Rasin factory	70
Gujranwala ..	1	Railway engineering workshop	240
Rawalpindi ..	1	Gas works	43
Mianwali ..	1	Railway engineeing workshop	32
		ALL OTHER FACTORIES.	
Hissar ..	1	Railway workshop.. ..	60
Gujranwala ..	1	Ice, mineral and aerated water factory	30
Gurjranwala ..	1	Rice mill	32
Multan ..	4	Despatch box and hospital furniture manufactory ..	161
Rohtak ..	1	Cotton ginning, cleaning and pressing factories ..	52
Ferozepore ..	5	Oil mill	20
Ferozepore ..	1	Cotton ginning, cleaning and pressing factories ..	140
Lahore ..	1	Oil mill	58

Number of industrial establishments and employees.

242. The total number of factories, mines, mills and other industrial establishments in the Punjab and Delhi is 801 and the total labour employed is 61,771 males and 4,755 females: of these 31,652 males or half the total number are skilled labourers, and 908 females, or one-fifth of the number of female workers are skilled workers. The type and number of industrial establishments is shown in the marginal table together with the number of employees, male and female.

Industrial establishments.	Total No. establishments.	Total of persons employed.	
		Males.	Females.
Growing of special products ..	34	1,726	303
Mines	17	3,355	72
Quarries of hard rocks ..	24	1,967	199
Textile and connected industries	203	11,804	1,731
Leather industries	15	418	9
Wood industries	8	661	..
Metal industries	37	3,324	2
Glass and earthenware industries	7	317	24
Industries connected with chemical products.	14	257	15
Food industries	115	4,658	132
Industries of dress	9	520	..
Furniture industries ..	9	334	..
Industries connected with buildings.	199	8,150	2,258
Railway Workshops ..	32	17,809	3
Production, application and transmission of physical forces.	16	1,738	1
Printing presses	62	4,733	6

It will be noticed that the railway workshops alone engage more than one-fourth of the total industrial workers in the two provinces: industries connected with textiles employ more than one-fifth. The other industries which engage more than 3,000 persons are mines, metal industries, food industries, printing-presses and industries connected with building. The highest proportion of children, *viz.*, 449 per 1,000 adults, is found in the glass and earthenware industries; tea factories also contain a fair proportion of children, there being 20 children to every 100 adults.

Local distribution of industries.

243. The local distribution of industrial and manufacturing concerns is given in part II of Table XXII and a summary of it is reproduced in the margin.

No.	District or State.	No. of Establishments.	No.	District or State.	No. of Establishments.
1	Lahore	121	21	Hissar	9
2	Amritsar	87	22	Karnal	9
3	Rawalpindi	50	23	Simla	9
4	Patiala State ..	50	24	Sheikhupura ..	9
5	Shahpur	43	25	Mianwali	9
6	Kangra	32	26	Jind State	9
7	Ambala	28	27	Hoshiarpur	8
8	Ludhiana	28	28	Jullundur	8
9	Lyallpur	28	29	Faridkote State ..	8
10	Gujrat	27	30	Kapurthala State ..	8
11	Montgomery.. ..	25	31	Ferozepore	7
12	Sialkot	23	32	Gujranwala	7
13	Mandi State ..	22	33	Gurgaon	3
14	Gurdaspur	18	34	Attock	2
15	Jhelum	16	35	Jhang	2
16	Nabha State.. ..	13	36	Muzaffargarh ..	2
17	Multan	11	37	Nahan State.. ..	1
18	Bahawalpur State ..	11		Delhi	38
19	Rohtak	10			
20	Dera Ghazi Khan ..	10		Total ..	801

Of the total number of 763 industrial concerns, Lahore, Amritsar, Rawalpindi, Patiala State and the Shahpur district provide not less than 351, the reasons being that conditions favourable to the growth of one industry are likely to be favourable to the growth of another, the existence of railway facilities, the supply of power, whether by coal, oil, water or electricity, and the proximity of connected industries being of prime importance. These considerations explain the position of Lahore and Amritsar in the marginal table.

In Ambala of the 28 concerns employing 1,421 persons, 6 are connected with cotton, 3 are flour mills, 3 flour mills and kikar khas factories, 7 brick kilns, 3 railway workshops, 2 science apparatus works and 3 printing-presses and 1 is a glass factory. In Kangra, there are 28 tea factories, 3 slate quarries and 1 carpet factory, the number of operatives at work in these factories and quarries being 2,345.

In Ludhiana 11 factories are connected with cotton, 1 is a flour mill, 8 are brick kilns, 2 ice factories and 6 tailoring establishments, the total number of employees being 793. In Sialkot, which is well known for its manufacture of sporting goods and metal works, no less than 18 factories employing 827 persons were registered under these heads. In Gujrat out of 27 factories 5 are wooden furniture factories and 19 brick kilns. In Shahpur there are 14 factories connected with cotton, 3 flour mills, 22 lime kilns, 2 petroleum wells, 1 salt mine, and 1 coal mine. The total labour force is 1,493. In the newly colonised districts of Montgomery and Lyallpur where cotton is grown on a large scale 32 factories,

or more than half the total number found in both the districts, are engaged in cotton-ginning and pressing. In Mandi State there are 6 tea factories and 16 slate quarries.

As regards the districts of Lahore, Amritsar, and Rawalpindi, Patiala State and Delhi province, which contain large cities and towns, the distributions of factories is as given below :—

Industry.	Lahore.	Amritsar.	Rawalpindi.	Patiala.	Delhi.
Mines	..	..	..	..	1
Cotton	23	22	1	11	..
Wool	1	6	..	..	..
Silk	..	7	..	..	..
Dyeing	..	1	..	..	..
Leather dyeing	10	1	..	..	..
Wood	4	..	..	..	..
Metal	7	5	3	..	2
Glass and earthen-ware	1	1	1	..	3
Chemical products	2	3	1	1	1
Food	8	13	4	19	3
Dress	1	1	1	..	..
Furniture	1	..	1	..	1
Building	23	20	18	13	19
Construction and transport	7	1	7	4	4
Production and transmission of physical forces	5	..	2	2	1
Luxury	28	6	1	..	2

Lahore exemplifies most types of industrialism except the silk and wool industry. The prominence of Amritsar depends mainly on textile and connected industries; it contains the only silk-reeling factory and dyeing factory found in the province employing more than 10 persons. In Rawalpindi and Patiala the high figures are due to the existence of many brick kilns. In Delhi the extensive building operations, consequent on the transfer of the seat of the Government of India to that city, alone accounts for half the number of factories enumerated there.

Variation in establishments employing 20 or more persons in 1911 and 1921.

244. The marginal statement contrasts the number of establishment employing 20 or more persons in the Punjab and Delhi at the last two censuses. These figures suggest a far greater industrial development than do the census figures proper. The general prosperity of the cotton trade, consequent on the high prices ruling during the war, and of the wide extension of the staple American cottons is emphasised by the number of new mills set up in Shahpur, Montgomery and Lyallpur. The growth of the building industry is also indicated by the figures and, it can hardly be doubted, represent the facts better than do the census figures which show an actual falling off in the total number of workers and dependants from 272,168 in 1911 to 159,261 in 1921. An important feature of the decade has been the exploitation of the petroleum fields in the Attock district.

Establishments.	Number in	
	1911.	1921.
All Industrial Establishments	443	538
Growing of special produce	41	23
Mines	10	17
Quarries of hard rocks	5	20
Textile and connected industries	104	154
Leather industries	3	10
Wood industries	1	5
Metal industries	37	19
Glass and earthenware industries	2	7
Industries connected with chemical products.	4	3
Food industries	61	50
Industries of dress	10	5
Furniture industries	4	6
Industries connected with buildings	97	141
Construction of means of transport	24	27
Production, application and transmission	6	11
Industries of luxury	34	40

Caste of owners, managers and workers in industrial establishments.

245. The details of the number and kind of industrial establishments classified according to the caste or race of the owners and managers is given in part III of Table XXII and shows that the Khatri, Aggarwal and Sheikh in the order named have the greatest number of persons as owners and managers. The figures are noted in the margin. It will be noticed that the Khatri and Aggarwal castes together furnish owners and managers of about half the total number of industrial establishments in the Punjab. This is no doubt due in part to the organising ability of the Khatri and Aggarwal, but is also a consequence of their commanding a large proportion of the floating capital of the country.

Caste.	Establishments.	
	Owners.	Managers.
Khatri	301	329
Aggarwal	51	60
Sheikh	55	60

The caste, race or birth-place of skilled workmen is given in part IV of Table XXII, and it shows that out of 28,442 skilled workmen (male, female, children and adult,) 15,777 or over 55 per cent. are provided by 7 castes alone. The numerical strength of skilled workers in these castes is noted in the margin. Unskilled workmen are for the most part drawn from the same class as skilled workmen, Sheikh, Brahman, Arain, and Rajput contributing large numbers of workers both skilled and unskilled. The chief castes providing unskilled workmen are noted in the margin.

Caste.	Number of skilled workers in industrial establishments according to caste.
Sheikh	4,239
Arain	2,960
Lohar	2,418
Khatri	1,700
Tarkhan	1,620
Brahman	1,460
Rajput	1,380

STATEMENT SHOWING NUMERICAL STRENGTH AND CASTE OF UNSKILLED WORKERS.

Caste.	Number.
Sheikh	1,985
Brahman	1,975
Arain	1,944
Rajput	1,768
Jat	1,763
Chamar	1,683
Khatri	1,396

Thus it will be seen that the Lohar (ironsmith) and Tarkhan (carpenter) form the typically skilled labour castes, while the Jat and Chamar provide the typical unskilled workman. The Sheikh, Arain, Khatri, Brahman, and Rajput provide both skilled and unskilled workmen in considerable numbers.

Most of the skilled workmen are born in the province, only 11·3 per cent. coming from outside the Punjab, most of them from the United Provinces. As the Punjab contains only 2·5 per cent. of foreign-born people, it is clear that the skilled workmen is definitely more ready to migrate than the average person.

Power-plant in industrial establishments.

246 Out of 801 factories in both the provinces, 414 in the Punjab and 16 in Delhi use mechanical power. The marginal table shows the number of factories employing the various forms of power generation. The total horse-power used in factories amounts to a little over 40,000. The details are given in the margin.

Power-plant.	Establishments. Punjab.	Establishments. Delhi.
Steam and electricity	12	..
Gas and Steam	..	1
Steam only	277	8
Oil only	66	1
Water only	16	..
Gas only	2	..
Electricity generated on premises ..	1	1
Electricity supplied from outside ..	40	5
	414	16

PUNJAB.

Power-plant.	No. of establishments.	Horse-power.
Steam	289	18,259
Oil	66	1,349
Water	16	not known.
Gas	2	415
Electricity generated on premises ..	13	9,176
Electricity supplied from outside ..	40	killowats. 12,964

Handlooms.

247. A record of all handlooms in use in the Punjab and Delhi provinces was obtained, distinguishing between those on which the ordinary shuttle (*nal*) and the fly-shuttle (Japani *nal*) are used.

The instructions issued in this connection were as follows :—

"During the preliminary enumeration the enumerator will record on the block list opposite the house of any cotton-weaver, or of any other person employing cotton-weavers, the number of looms (*khadi*) used by such person, and will record separately the number of looms with the ordinary shuttle (*desi nal*) and those with the fly-shuttle (Japani *nal*) which is worked by the foot. On the completion of the preliminary enumeration each enumerator will report the number of looms of each sort in his Circle to the Supervisor, who after collecting all such reports for his circle will forward them to the Charge Superintendent. The Charge Superintendent will prepare a return in the following form which he will send to the Tahsildar, before the 1st March :—

District................Charge No................

Circle No.	Block No.	No. of Looms in existence. With ordinary shuttle.	No. of Looms in existence. With fly-shuttle.
1	2	3	4

The Tahsildar will prepare a similar return for the Tahsil as a whole and forward it to the District Census Officer. The complete return for the District should reach the Provincial Superintendent before 15th March 1921."

The statistics collected from these reports show that cotton-weaving as a domestic industry is carried on by means of hand-looms in nearly every village of the Punjab and Delhi provinces. The total for the Punjab is 268,169 with ordinary shuttles and 2,338 with fly-shuttles (21,418 with ordinary shuttles and 1,559 with fly-shuttles for urban areas and 246,751 with ordinary and 779 with fly-shuttles for rural areas) and for Delhi 1,066 and 1 respectively.

Section VI.—Conditions of Labour and Cottage Industries.

248. As desired by the Census Commissioner, the Deputy Commissioners of districts and Census Superintendents of States were asked to send a brief note on the economic conditions prevailing in their districts and States under the following heads :— **Introductory.**

(*i*) Economic conditions and movements of labour.
(*ii*) Density and overcrowding of labourers in towns and other centres of trades.
(*iii*) Cottage industries.
(*iv*) The influence of caste on industrial development.
(*v*) Conditions of female labour in industries.
(*vi*) Rural trade.

The summary of the information thus collected is given below for reference.

249. Inadequacy of labour is reported in Amritsar, Sialkot, Sheikhupura, Lyallpur and Muzaffargarh districts and Suket, Loharu and Nahan States. In all other districts and States of the province a sufficiency of labour, both skilled and unskilled, is reported. Agricultural labourers are usually drawn from low castes like the Chamar, Teli, Nai, Lohar, etc. The small number of agriculturists, who have become landless through want of thrift, enter into partenerships in cultivation with their well-to-do brethren or work as agricultural labourers; but they regard it as beneath their dignity to do earth-work as in the excavation of canals and in the construction of rail and road embankments. Women and children help their own relations in cultivation, and are sometimes employed as agricultural labourers, specially at harvest times. The agricultural labourer is probably much better off than he used to be. **Economic conditions of labour.**

The old system of *begar* (forced through remunerated labour) has almost disappeared. The *kamin* or village labourer is no longer content with his hereditary dues, and the custom of payment in kind has saved the agricultural labourer from the effects of the rise in prices which has been going on more or less steadily during the last 60 years.

250. The conditions in which operatives live in large towns are probably more unhealthy than that of the average resident of a village. The remarks of the District Census Officer, Amritsar, which is a great industrial centre, are illuminating. He writes :— **Overcrowding of labourers in towns and other industrial centres.**

"There are at this time nearly 4,000 regular labourers working in 79 industrial establishments in this city. Nearly 500 of these are permanent labourers, the others are constantly changing. The average number at normal times is 3,000 and rises to nearly 5,000 in the busy season. The labourers working in trade-marts are generally unskilled. As for their housing conditions, permanent labourers are sometimes provided with free quarters by the factory owners. Nearly all outside labourers have got free quarters ; other labourers live in such houses as they can afford to rent, skilled labourers generally living in healthier surroundings than the unskilled. A great number live in narrow lanes. Their social status is low ; an ordinary baboo getting Rs. 30 per mensem in an office claims superiority over a skilled labourer who is earning Rs. 100 monthly. The condition of unskilled labourers is still worse, the most fortunate among them get free quarters to live in factories and mills, others hire common shops in batches of 10 or 20. The remaining are houseless and sleep their night away on platforms of closed shops."

251. Cotton-weaving is generally done by means of handlooms by Chamars, Dhanaks and Julahas in all the villages. The village looms weave *khaddar*, durries, towels, *khes*, *dhotis* and other articles of ordinary use. The thread **Cottage industries**

used for fine cloth is usually a mixture of Purbi and Desi, while Desi thread is used for coarse cloth. The Purbi thread is imported from Cawnpore and Bombay and the Desi thread is manufactured locally. Village weavers generally weave for individual customers who supply their own yarn which is ordinarily home-spun. The weaver is paid either in cash or in kind. In certain cases cloth woven is sold by the weaver to the middleman who makes a profit of 6 pies per rupee and the weaver gains Rs. 5 to Rs. 8 per cent. of his outlay. The length of cloth woven per day by an ordinary weaver on a Desi loom is 8 to 10 yards, and on looms of Japani *Nal* 15 to 25 yards. The cost of an ordinary loom is from Rs.12 to Rs. 20. The weavers usually work from 8 to 10 hours and are assisted by their wives and children in the preliminary stages of getting the thread ready for the work. After the warp is set up the weaving is done by men only. The standard of comfort amongst weavers is the same as that of agriculturists.

Other fairly common cottage industries are silk-worm-rearing which is being developed under the control of the Department of Agriculture, mainly in the districts of Gurdaspur, Amritsar and Sialkot; rope and string-making, curing of hides, pottery, oil-pressing and sugar extraction and shoe-making. Cottage industries generally are probably well-suited, within strict limitations to the present stage of the Punjab's industrial development, but many of them have inevitably to be crushed sooner or later by the more efficient system of mass production.

Speculative. 252. It has been pointed out that agriculture is the basic industry of the province and that during the last 30 years agriculture has been responsible for producing a considerable surplus of wealth. This surplus is an essential condition of industrial organisation, and for many years to come the profits from agriculture must be relied on to supply the capital for the establishment of industrial concerns. When cheap power becomes available and capital less shy than it is at present, it is possible that the Punjab may remain prosperous without having recourse to surplus production and to the export of agricultural produce. But this state of affairs, if it is to be permanent, must come about with a minimum of interference with healthy economic conditions. It is a mistaken belief to suppose that wealth derived from manufactures is in itself more desirable than wealth derived from agricultural pursuits.

I. General distribution by occupation (Punjab and Delhi). II. Distribution by occupation in Natural Divisions. III. Distribution of agricultural, industrial, commercial and professional population in Natural Divisions, Districts and States. IV. Occupations combined with agriculture (where agriculture is the subsidiary occupation) V. Occupations combined with agriculture (where agriculture is the principal occupation) VI. Occupation of females by sub-classes and selected orders and groups (Punjab and Delhi). VII. Selected occupations 1921, 1911 and 1901. VIII. Occupations of selected castes (Punjab and Delhi). XI. Number of persons employed on the 18th March 1921 on Railways and in the Irrigation Department in the Punjab and Delhi. IXA. Number of persons employed in the Post Office and Telegraph Department on the 18th March 1921, in the Punjab and Delhi.

(OCCUPATIONAL)—SUBSIDIARY TABLE I.

General distribution by occupation.

Class, Sub-class and Order.	Number per 10,000 of total population.		Percentage in each Class, Sub-class and Order of		Percentage of dependants to actual workers.
	Persons supported.	Actual workers.	Actual workers.	Dependants.	
1	2	3	4	5	6
PUNJAB—					
CLASS A.—PRODUCTION OF RAW MATERIALS	**6,061**	**2,121**	**35**	**65**	**186**
SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATIONS	**6,052**	**2,117**	**35**	**65**	**186**
Order 1. Pasture and Agriculture	6,046	2,115	35	65	186
(a) Ordinary cultivation	*5,886*	*2,022*	*34*	*66*	*191*
(b) Growers of special products and market gardening ..	*12*	*5*	*48*	*52*	*110*
(c) Forestry	*9*	*4*	*47*	*53*	*113*
(d) Raising of farm stock	*139*	*84*	*60*	*40*	*68*
(e) Raising of small animals	..	..	*78*	*22*	*27*
Order 2. Fishing and Hunting	6	2	34	66	198
SUB-CLASS II.—EXPLOITATION OF MINERALS	**9**	**4**	**43**	**57**	**133**
Order 3. Mines	1	..	41	59	142
Order 4. Quarries of hard rocks	3	2	46	54	117
Order 5. Salt, etc.	4	2	41	59	144
CLASS B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	**2,807**	**1,020**	**36**	**64**	**175**
SUB-CLASS III.—INDUSTRY	**1,926**	**714**	**37**	**63**	**170**
Order 6. Textiles	405	159	39	61	154
Order 7. Hides, skins and hard materials from animal kingdom ..	27	9	34	66	196
Order 8. Wood	202	69	34	66	192
Order 9. Metals	95	31	32	68	209
Order 10. Ceramics	147	51	35	65	188
Order 11. Chemical products properly so called as analogous ..	62	21	33	67	202
Order 12. Food industries	86	35	41	59	142
Order 13. Industries of dress and the toilet	509	176	35	65	189
Order 14. Furniture industries	2	1	33	67	199
Order 15. Building industries	63	25	39	61	156
Order 16. Construction of means of transport	..	..	43	57	134
Order 17. Production and transmission of physical forces (heat, light, electricity, motive power, etc.)	1	..	38	62	163
Order 18. Other miscellaneous and undefined industries	327	137	42	58	138
SUB-CLASS IV.—TRANSPORT	**194**	**73**	**38**	**62**	**165**
Order 19. Transport by air	..	..	49	51	105
Order 20. Transport by water	23	8	36	64	176
Order 21. Transport by road	98	35	36	64	180
Order 22. Transport by rail	64	27	41	59	143
Order 23. Post office, telegraph and telephone services ..	9	3	37	63	169
SUB-CLASS V.—TRADE	**686**	**232**	**34**	**66**	**195**
Order 24. Banks, establishment of credit, exchange and insurance ..	64	18	28	72	263
Order 25. Brokerage, commission and export	12	4	35	65	188
rder 26. Trade in textiles	52	16	31	69	218
der 27. Trade in skins, leather and furs	10	4	36	64	180
ler 28. Trade in wood	8	3	36	64	180
r 29. Trade in metals	2	1	38	62	163
30. Trade in pottery, bricks and tiles	..	..	41	59	144
31. Trade in chemical products	11	4	33	67	199
Hotels, cafes, restaurants, etc.	4	2	40	60	150
Other trade in food stuffs	365	127	35	65	188
Trade in clothing and toilet articles	10	3	34	66	190
rade in furniture	5	2	37	63	170
rade in building materials	1	..	32	68	212
rade in means of transport	26	9	33	67	204
rade in fuel	3	1	39	61	157
ade in articles of luxury and those pertaining to letters and e arts and sciences.	7	3	37	63	169
ade of other sorts	107	37	35	65	186

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Dhanak

(OCCUPATIONAL)—SUBSIDIARY TABLE I.

General distribution by occupation—*continued.*

Class, Sub-class and Order.	Number per 10,000 of total population.		Percentage in each Class, Sub-class and Order of		Percentage of dependants to actual workers.
	Persons supported.	Actual workers.	Actual workers.	Dependants.	
1	2	3	4	5	6
PUNJAB—*concluded.*					
CLASS C.—PUBLIC ADMINISTRATION AND LIBERAL ARTS ..	382	150	39	61	156
SUB-CLASS VI.—PUBLIC FORCE	105	47	45	55	124
Order 41. Army	70	34	48	52	109
Order 42. Navy	..	..	67	33	50
Order 43. Air-force	..	..	74	26	35
Order 44. Police	35	13	38	62	163
SUB-CLASS VII.—PUBLIC ADMINISTRATION (Order 45) ..	63	23	36	64	180
SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS ..	214	80	37	63	168
Order 46. Religion	130	48	37	63	172
Order 47. Law	8	2	29	71	248
Order 48. Medicine	18	7	38	62	161
Order 49. Instruction	22	9	39	61	155
Order 50. Letters, arts and sciences	36	14	39	61	153
CLASS D.—MISCELLANEOUS	750	322	43	57	133
SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME (Order 51)	25	10	37	63	167
SUB-CLASS X.—DOMESTIC SERVICE (Order 52)	255	111	44	56	129
SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS.	228	95	42	58	139
(Order 53. General terms which do not indicate a definite occupation). ..					
SUB-CLASS XII.—UNPRODUCTIVE	242	106	44	56	130
Order 54. Inmates of jails, asylums and alms-houses	6	5	84	16	18
Order 55. Beggars, vagrants, prostitutes	236	100	42	58	136
Order 56. Other unspecified non-productive industries	..	..	40	60	150
DELHI—					
CLASS A.—PRODUCTION OF RAW MATERIALS	2,930	908	31	69	223
SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION	2,915	904	31	69	222
Order 1. Pasture and Agriculture	2,903	901	31	69	222
(*a*) *Ordinary cultivation*	*2,775*	*840*	*30*	*70*	*230*
(*b*) *Growers of special products and market gardening*	*65*	*27*	*41*	*59*	*142*
(*c*) *Forestry*	*13*	*8*	*59*	*41*	*70*
(*d*) *Raising of Farm stock*	*49*	*26*	*53*	*47*	*88*
(*e*) *Raising of small animals*	..	..	..	..	..
Order 2. Fishing and Hunting	12	3	26	74	290
SUB-CLASS II.—EXPLOITATION OF MINERALS	15	4	27	73	274
Order 3. Mines	..	..	43	57	133
Order 4. Quarries of hard rocks	7	3	40	60	147
Order 5. Salt, etc.	8	1	15	85	573
CLASS B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES ..	5,250	2,240	43	57	134
SUB-CLASS III.—INDUSTRY	3,038	1,253	41	59	147
Order 6. Textiles	358	140	39	61	155
Order 7. Hides, skins and hard materials from animal kingdom ..	116	55	47	53	112
Order 8. Wood	142	63	44	56	127
Order 9. Metals	201	77	38	62	161
Order 10. Ceramics	207	86	42	58	140
Order 11. Chemical products properly so called and analogous ..	95	35	37	63	174
Order 12. Food industries	152	59	39	61	159
Order 13. Industries of dress and the toilet	802	279	35	65	187
Order 14. Furniture industries	19	9	47	53	112
Order 15. Building industries	373	180	48	52	108
Order 16. Construction of means of transport	7	3	45	55	123
Order 17. Production and transmission of physical forces (heat, light, electricity, motive power, etc.)	31	18	58	42	71
Order 18. Other miscellaneous and undefined industries	586	250	43	57	135

(OCCUPATIONAL)—SUBSIDIARY TABLE I.

General distribution by occupation—*concluded*.

Class, Sub-class and Order.	Number per 10,000 of total population.		Percentage in each Class, Sub-class and Order of		Percentage of dependants to actual workers.
	Persons supported.	Actual workers.	Actual workers.	Dependants.	
1	2	3	4	5	6
DELHI—					
SUB-CLASS IV.—TRANSPORT	613	301	49	51	104
Order 19. Transport by air	..	..	..	..	..
Order 20. Transport by water	18	8	46	54	119
Order 21. Transport by road	272	124	46	54	119
Order 22. Transport by rail	283	154	54	46	84
Order 23. Post office, telegraph and telephone services	39	15	38	62	163
SUB-CLASS V.—TRADE	1,549	686	44	56	126
Order 24. Banks, establishment of credit, exchange and insurance ..	112	27	24	76	319
Order 25. Brokerage, commission and export	36	20	56	44	79
Order 26. Trade in textiles	252	123	49	51	105
Order 27. Trade in skins, leather and furs	15	7	44	56	126
Order 28. Trade in wood	19	9	50	50	100
Order 29. Trade in metals	13	9	67	33	49
Order 30. Trade in pottery, bricks and tiles	8	4	59	41	69
Order 31. Trade in chemical products	44	20	46	54	118
Order 32. Hotels, cafes, resturants, etc.	17	10	58	42	·74
Order 33. Other trade in food stuffs	579	239	41	59	142
Order 34. Trade in clothing and toilet articles	157	69	44	56	127
Order 35. Trade in furniture	26	10	41	59	145
Order 36. Trade in building materials	54	38	71	29	41
Order 37. Trade in means of transport	26	12	48	52	109
Order 38. Trade in fuel	17	7	41	59	143
Order 39. Trade in articles of luxury and those pertaining to letters and the arts and sciences.	68	27	40	60	147
Order 40. Trade of other sorts	107	54	50	50	101
CLASS C.—PUBLIC ADMINISTRATION AND LIBERAL ARTS ..	720	359	50	50	100
SUB-CLASS VI.—PUBLIC FORCE	196	123	63	37	59
Order 41. Army	146	98	67	33	50
Order 42. Navy	..	..	..	..	..
Order 43. Air-force	..	..	..	..	..
Order 44. Police	49	25	52	48	94
SUB-CLASS VII.—PUBLIC ADMINISTRATION (Oder 45) ..	179	101	56	44	78
SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS	345	135	39	61	155
Order 46. Religion	153	54	36	64	181
Order 47. Law	20	7	34	66	192
Order 48. Medicine	57	27	48	52	110
Order 49. Instruction	65	24	38	62	166
Order 50. Letters, arts and sciences	50	23	45	55	122
CLASS D.—MISCELLANEOUS	1,099	641	58	42	72
SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME (Order 51)	90	40	44	56	126
SUB-CLASS X.—DOMESTIC SERVICE (Order 52)	485	281	58	42	73
SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS ..	409	266	65	35	54
(Order 53.—General terms which do not indicate a definite occupation.)					
SUB-CLASS XII.—UNPRODUCTIVE	115	54	47	53	113
Order 54. Inmates of jails, asylums and alms-houses	5	1	17	83	476
Order 55. Beggars, vagrants, prostitutes	110	53	48	52	107
Order 56. Other unspecified non-productive industries	..	..	..	..	..

(OCCUPATIONAL)—SUBSIDIARY TABLE II.

Distribution by occupation in Natural Divisions.

OCCUPATION.	NUMBER *per mille* OF TOTAL POPULATION SUPPORTED IN					
	Punjab.	Indo-Gangetic Plain West.	Himalayan.	Sub-Himalayan.	North-West Dry Area.	Delhi.
1	2	3	4	5	6	7
SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION.	605	596	830	569	593	291
SUB-CLASS II.—EXPLOITATION OF MINERALS ..	1	1	1	1	..	1
SUB-CLASS III.—INDUSTRY	193	207	87	222	167	309
SUB-CLASS IV.—TRANSPORT	19	21	9	17	21	61
SUB-CLASS V.—TRADE	69	70	24	71	77	155
SUB-CLASS VI.—PUBLIC FORCE	10	10	6	18	6	20
SUB-CLASS VII.—PUBLIC ADMINISTRATION	6	6	3	5	10	18
SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS ..	21	21	14	27	18	34
SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME ..	3	3	3	3	1	9
SUB-CLASS X.—DOMESTIC SERVICE	25	27	10	31	22	49
SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS	23	14	6	16	51	41
SUB-CLASS XII.—UNPRODUCTIVE	24	24	7	20	34	12

(OCCUPATIONAL)—SUBSIDIARY TABLE III.

Distribution of the agricultural, Industrial, commercial and professional population in Natural Divisions, Districts and States.

District, State and Natural division.	Agriculture. Population supported by agriculture.	Agriculture. Proportion of agricultural population per 1,000 of district population.	Agriculture. Percentage on agricultural population of— Actual workers.	Agriculture. Percentage on agricultural population of— Dependants.	Industry (including mines). Population supported by industry.	Industry. Proportion of industrial population per 1,000 of district population.	Industry. Percentage on industrial population of— Actual workers.	Industry. Percentage on industrial population of— Dependants.	Commerce. Population supported by commerce.	Commerce. Proportion of commercial population per 1,000 of district population.	Commerce. Percentage on commercial population of— Actual workers.	Commerce. Percentage on commercial population of— Dependants.	Professions. Population supported by professions.	Professions. Proportion of professional population per 1,000 of district population.	Professions. Percentage on professional population of— Actual workers.	Professions. Percentage on professional population of— Dependants.	Others. Population supported by other occupations.	Others. Proportion of population supported by other occupations per 1,000 of district population.	Others. Percentage on population supported by other occupations of— Actual workers.	Others. Percentage on population supported by other occupations of— Dependants.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PUNJAB ..	14,804,241	590	34	66	4,856,545	193	37	63	2,210,370	89	35	65	536,314	21	37	63	2,693,590	107	45	55
1. Indo-Gangetic Plain West—	6,650,939	581	35	65	2,387,107	209	38	62	1,040,690	91	35	65	245,053	21	40	60	1,122,927	98	46	54
1. Hissar ..	546,221	669	34	66	116,137	142	36	61	71,203	87	31	69	12,696	16	37	63	70,553	86	45	55
2. *Loharu State* ..	12,762	619	32	68	3,741	181	23	77	1,241	60	20	80	909	44	18	82	1,968	96	24	76
3. Rohtak ..	488,160	632	32	68	162,625	210	36	64	65,639	85	32	68	12,815	17	42	58	43,033	56	45	55
4. *Dujana State* ..	15,900	616	39	61	5,124	198	33	67	2,130	82	28	72	428	17	35	65	2,251	87	33	67
5. Gurgaon ..	439,355	644	36	64	117,779	173	41	59	61,675	90	36	64	11,676	17	35	65	51,518	76	46	54
6. *Pataudi State*	10,286	568	37	63	3,526	195	47	53	1,864	103	36	64	502	28	[illegible]	53	1,919	106	43	57
7. Karnal ..	502,115	606	36	64	173,712	209	41	59	70,233	85	37	63	15,650	19	46	54	67,016	81	49	51
8. Jullundur ..	450,711	548	36	64	228,798	278	39	61	51,289	63	36	64	23,285	28	38	62	68,461	83	44	56
9. *Kapurthala State*	169,753	597	34	66	71,610	252	35	65	15,531	55	34	66	5,466	19	39	61	21,915	77	44	56
10. Ludhiana ..	320,572	565	35	65	129,708	228	33	67	45,890	81	35	65	13,351	24	38	62	58,101	102	40	60
11. *Malerkotla State*	43,850	546	36	64	17,972	224	33	67	7,643	95	53	47	1,907	24	40	60	8,950	111	52	48
12. Ferozepore ..	693,972	632	31	69	221,975	202	35	65	69,299	63	33	67	13,995	13	40	60	99,007	90	42	58
13. *Faridkot State* ..	109,724	728	33	67	17,847	118	34	66	12,733	85	40	60	825	6	47	53	9,532	63	38	62
14. *Patiala State* ..	958,750	639	41	59	233,090	156	40	60	115,334	77	36	64	29,110	19	43	57	163,455	109	53	47
15. *Jind State* ..	209,086	678	31	69	51,629	168	33	67	22,159	72	34	66	3,948	13	42	58	21,361	69	49	51
16. *Nabha State* ..	162,917	619	35	65	43,926	167	36	64	21,378	81	38	62	9,825	37	33	67	25,288	96	44	56
17. Lahore ..	487,404	431	32	68	236,256	209	40	60	183,590	162	39	61	35,663	31	39	61	188,423	167	47	53
18. Amritsar ..	406,351	437	34	66	288,434	310	40	60	109,381	118	33	67	21,851	24	41	59	103,357	111	45	55
19. Gujranwala ..	315,408	506	33	67	160,661	258	37	63	66,357	106	34	66	18,782	30	37	63	62,373	100	41	59
20. Sheikhupura ..	307,642	588	33	67	102,557	196	38	62	46,121	88	37	63	12,369	24	37	63	54,446	104	45	55
2. Himalayan ..	1,415,088	814	46	54	151,849	88	47	53	57,762	33	50	50	24,517	14	48	52	88,585	51	63	37
21. *Nahan State* ..	118,513	844	63	37	10,287	73	55	45	2,941	21	54	46	1,291	9	40	60	7,416	53	68	32
22. Simla ..	19,560	432	50	50	6,566	145	70	30	6,774	149	72	28	1,552	34	58	42	10,875	240	70	30
23. *Simla Hill States*	274,226	891	41	59	14,505	47	50	50	6,848	22	55	45	2,432	8	42	58	8,707	29	63	37
24. *Bilaspur State* ..	78,725	803	38	62	11,647	119	44	56	2,404	25	48	52	880	9	48	52	4,344	4	69	31
25. Kangra ..	590,520	771	40	60	89,474	117	43	57	30,650	40	43	57	14,722	19	48	52	40,699	53	54	16
26. *Mandi State* ..	158,798	858	62	38	11,217	61	49	51	2,832	15	59	41	1,467	8	46	54	10,734	58	86	14
27. *Suket State* ..	49,084	903	44	56	1,948	36	49	51	1,300	24	48	52	984	18	39	61	1,012	19	62	38
28. *Chamba State*	125,662	886	48	52	6,205	44	60	10	4,013	28	52	48	1,189	8	56	44	4,798	34	58	42
3. Sub-Himalayan	3,261,262	559	32	68	1,303,050	223	36	64	516,398	88	34	66	156,146	27	34	66	602,013	103	44	56
29. Ambala ..	360,023	528	37	63	149,157	219	41	59	59,747	88	40	60	19,026	28	38	62	93,524	137	51	49
30. *Kalsia State* ..	38,982	679	41	59	9,149	159	40	60	2,725	48	38	62	1,233	22	44	56	5,282	92	60	40
31. Hoshiarpur ..	560,592	605	36	64	216,599	234	37	63	51,144	55	39	61	25,439	27	34	66	73,645	79	41	59
32. Gurdaspur ..	468,702	550	32	68	195,059	229	37	63	76,687	90	32	68	22,575	26	36	64	89,169	105	40	60
33. Sialkot ..	454,122	481	31	69	266,919	285	34	66	90,064	96	31	69	29,431	31	32	68	97,287	104	39	61
34. Gujrat ..	462,252	561	29	71	184,563	224	34	66	90,196	109	33	67	19,558	24	35	65	67,477	82	38	62
35. Jhelum ..	258,230	541	29	71	103,335	217	32	68	52,541	110	28	72	14,064	29	33	67	48,898	103	38	62
36. Rawalpindi ..	348,259	612	30	70	82,428	145	42	58	47,235	83	38	62	12,686	22	37	63	78,616	138	56	44
37. Attock ..	310,100	605	30	70	95,841	187	36	64	46,059	90	30	70	12,134	24	36	64	48,115	94	39	61
4. North-West Dry Area—	8,476,952	572	31	69	1,014,539	167	35	65	595,520	98	33	67	110,598	18	33	67	880,065	145	43	57
38. Montgomery ..	416,208	583	30	70	116,758	163	33	67	53,960	76	34	66	13,288	19	32	68	113,572	159	43	57
39. Shahpur ..	390,284	542	31	69	125,822	175	35	65	69,405	96	33	67	14,088	20	33	67	120,319	167	39	61
40. Mianwali ..	218,443	610	29	71	52,133	146	35	65	40,938	114	30	70	5,896	16	31	69	40,795	114	46	54
41. Lyallpur ..	574,150	586	28	72	176,093	180	35	65	69,456	71	37	63	14,929	15	34	66	144,835	148	42	58
42. Jhang ..	279,981	491	32	68	143,534	252	36	64	68,925	120	28	72	13,619	24	31	69	64,500	113	43	57
43. Multan ..	461,162	518	33	6.	161,864	182	35	65	96,705	109	35	65	19,625	22	36	64	150,908	169	43	57
44. *Bahawalpur State*	484,271	620	33	67	102,425	131	33	67	70,361	90	34	66	12,803	16	31	69	111,331	143	45	55
45. Muzaffargarh ..	348,197	612	32	68	77,624	137	36	64	62,460	110	32	68	7,948	14	31	66	72,249	127	41	59
46. D. G. Khan	304,256	614	34	66	58,286	118	42	58	63,310	127	31	69	8,402	17	40	60	61,556	124	45	55
Cities ..	81,737	155	48	52	120,480	229	39	61	167,217	317	38	62	25,533	48	41	59	131,838	250	48	52
DELHI ..	138,664	284	31	69	151,506	310	40	60	105,548	216	46	54	16,839	35	39	61	75,631	155	58	42
Delhi City ..	23,136	76	21	79	112,963	371	40	60	88,631	291	47	53	13,960	46	38	62	65,730	216	59	41

(OCCUPATIONAL)—SUBSIDIARY TABLE IV.

Occupations combined with agriculture (where agriculture is the subsidiary occupation).

Occupation.	NUMBER *per mille* WHO ARE PARTIALLY AGRICULTURISTS.					
	Punjab.					*Delhi.*
	Province.	Indo-Gangetic Plain West	Hima-layan.	Sub-Hima-layan.	North-West Dry Area.	Indo-Gangetic Plain West
1	2	3	4	5	6	7
SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION	1	1	1	1	1	..
Agriculture	..	..	..	..	..	..
Pasture	15	12	32	21	12	4
Fishing and Hunting	33	33	73	2	37	..
Others	31	12	96	27	16	..
SUB-CLASS II.—EXPLOITATION OF MINERALS ..	20	23	6	19	2	45
SUB-CLASS III.—INDUSTRY	42	44	156	37	23	11
Textile	34	40	127	32	16	19
Wood	73	91	189	61	24	18
Metal	77	81	227	61	34	20
Ceramics	32	31	169	24	24	8
Food	22	19	76	14	14	7
Dress and the toilet	53	54	205	44	27	15
Others	30	28	86	30	26	5
SUB-CLASS IV.—TRANSPORT	28	23	78	33	20	1
SUB-CLASS V.—TRADE	41	43	89	35	35	4
Banks, etc.	110	104	136	109	161	31
Textiles	27	26	96	23	21	..
Foodstuffs	39	41	95	30	32	7
Shopkeepers (unspecified)	32	22	44	21	35	3
Others	30	30	51	24	39	1
SUB-CLASS VI.—PUBLIC FORCE	60	59	108	53	55	18
SUB-CLASS VII.—PUBLIC ADMINISTRATION	48	51	117	51	34	23
SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS	57	55	163	46	41	107
Religion	68	69	182	56	43	33
Others	40	36	131	31	37	6
SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME	118	112	203	121	52	2
SUB-CLASS X.—DOMESTIC SERVICE	25	26	52	27	14	6
Cooks and water-carriers, etc.	25	27	51	27	14	6
Others	25	20	67	29	21	8
SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS	14	11	42	24	10	..
Labourers and workmen (unspecified)	13	9	44	25	10	..
Others	22	22	35	18	23	2
SUB-CLASS XII.—UNPRODUCTIVE	22	27	42	33	9	12
Beggars, vagrants and procurers, etc.	23	28	43	33	10	13
Others	1	..	..	4	..	..

(OCCUPATIONAL)—SUBSIDIARY TABLE V.

Occupations combined with agriculture (where agriculture is the principal occupation).

Landlords (Rent-receivers). Subsidiary occupation.	No. per 10,000 who follow it.	Cultivators (Rent-payers). Subsidiary Occupation.	No. per 10,000 who follow it.	Farm servants and field labourers. Subsidiary Occupation.	No. per 10,000 who follow it.
1	2	3	4	5	6
PUNJAB.					
TOTAL ..	1,680	TOTAL ..	681	TOTAL ..	613
Rent-payers	244	Rent-receivers	84	Rent-receivers	46
Agricultural labourers	71	Agricultural labourers	22	Rent-payers	55
Government employees of all kinds	165	General labourers	29	General labourers	79
Money-lenders and grain-dealers ..	79	Government employees of all kinds ..	51	Village watchmen	10
Other traders of all kinds ..	148	Money-lenders and grain-dealers ..	13	Cattle-breeders and milkmen ..	15
Priests	76	Other traders of all kinds ..	27	Mill hands	3
Clerks of all kinds (not Government)	10	Fishermen and boatmen ..	1	Fishermen and boatmen ..	1
School masters	22	Cattle-breeders and milkmen ..	12	Rice-pounders	1
Lawyers	6	Village watchmen	6	Shopkeepers and Pedlars ..	11
Estate agents and managers ..	5	Weavers	17	Oil-pressers	5
Medical practitioners	8	Barbers	11	Weavers	49
Artisans	101	Oil-pressers	6	Potters	3
Others	745	Washermen	2	Leather workers	71
		Potters	9	Washermen	2
		Blacksmiths and carpenters ..	41	Blacksmiths and carpenters ..	11
		Others	350	Others	251
DELHI.					
TOTAL ..	3,645	TOTAL ..	969	TOTAL ..	1,094
Rent-payers	256	Rent-receivers	91	Rent-receivers	6
Agricultural labourers	10	Agricultural labourers	38	Rent-payers	136
Government employees of all kinds ..	1,546	General labourers	69	General labourers	26
Money-lenders and grain-dealers ..	72	Government employees of all kinds ..	191	Village watchmen	16
Other traders of all kinds ..	82	Money lenders and grain-dealers ..	18	Cattle-breeders and milkmen ..	6
Priests	164	Other traders of all kinds ..	17	Mill hands	2
Clerks of all kinds (not Government)	..	Fishermen and boatmen ..	..	Fishermen and boatmen ..	..
School masters	10	Cattle breeders and milkmen ..	71	Rice pounders	..
Lawyers	..	Village watchmen	6	Shopkeepers and pedlars ..	2
Estate agents and managers ..	..	Weavers	3	Oil-pressers	..
Medical practitioners	..	Barbers	6	Weavers	422
Artisans	..	Oil-pressers	..	Potters	2
Others	1,505	Washermen .. +	..	Leather workers	355
		Potters	..	Washermen	..
		Blacksmiths and carpenters ..	16	Blacksmiths and carpenters ..	24
		Others	443	Others	97

(OCCUPATIONAL)—SUBSIDIARY TABLE VI.

Occupations of females by sub-classes and selected orders and groups.

Group.	Occupation.	Number of actual workers. Males.	Females.	Number of females per 1,000 males.
1	2	3	4	5
	PUNJAB.			
	SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION.	4,830,170	483,689	100
	ORDER 1.—PASTURE AND AGRICULTURE.	4,825,648	483,429	100
	(a) Ordinary cultivation	*4,602,029*	*472,525*	*103*
1	Income from rent of land	266,320	71,459	268
5	Field labourers	229,483	27,539	120
	(b) Growers of special products and market gardening.	*12,477*	*1,312*	*105*
6	Tea, coffee, cinchona, rubber and indigo plantations.	2,278	738	324
	(c) Forestry	*9,315*	*1,271*	*136*
9	Woodcutters, firewood, catechu, rubber, etc., collectors and charcoal burners.	7,510	1,190	158
	(e) Raising of small animals ..	*29*	*3*	*103*
15	Birds, bees, etc.	7	3	429
	SUB-CLASS II.—EXPLOITATION OF MINERALS.	8,531	1,059	124
	ORDER 3.—MINES	1,111	47	42
21	Mines and metallic minerals (gold, iron, manganese, etc.).	4	3	750
22	ORDER 4.—QUARRIES OF HARD ROCKS, OTHER MINERALS (JADE, DIAMONDS, LIMESTONE, ETC.).	3,565	396	111
	ORDER 5.—SALT, ETC.	3,855	616	160
23	Rock, sea and marsh salt ..	688	184	267
24	Extraction of saltpetre, alum, and other substances soluble in water.	3,167	432	136
	SUB-CLASS III.—INDUSTRY ..	1,448,432	344,730	238
	ORDER 6.—TEXTILES	283,078	117,180	414
25	Cotton ginning, cleaning and pressing	27,708	3,207	116
26	Cotton spinning	5,890	57,049	9,686
27	Cotton sizing and weaving ..	230,109	51,470	224
28	Jute spinning, pressing and weaving	376	120	319
29	Rope, twine and string	11,093	3,283	296
31	Wool carding and spinning ..	271	337	1,244
34	Silk spinners	901	184	204
35	Silk weavers	518	84	162
37	Dyeing, bleaching, printing preparation and sponging of textiles.	2,273	440	194
38	Lace, crepe, embroideries, fringes, etc., and insufficiently described textile industries.	482	779	1,616
	ORDER 7.—HIDES, SKINS AND HARD MATERIALS FROM THE ANIMAL KINGDOM.	20,239	2,659	131
39	Tanners, curriers, leather dressers and leather dyers, etc.	14,627	2,305	158
	ORDER 8.—WOOD	166,293	7,597	46
45	Basket makers and other industries of wooden material including leaves and the thatchers and building working with bamboo or reeds or similar materials.	*26,647*	*5,306*	199
	ORDER 10.—CERAMICS	116,163	12,180	105
52	Makers of glass and crystal ware ..	76	10	132
53	Makers of glass bangles, glass beads, and necklaces and glass ear studs, etc.	1,275	281	220
56	*Brick and tile makers*	28,491	3,452	121
	ORDER 12.—FOOD INDUSTRIES ..	52,805	36,131	684
65	Rice pounders and huskers and flour grinders.	10,360	24,406	2,350
66	Bakers and biscuit makers ..	6,582	2,690	409
67	Grain parchers, etc.	6,501	7,970	1,220
	ORDER 13.—INDUSTRIES OF DRESS AND THE TOILET.	397,298	43,905	111
76	Hat, cap and turban makers ..	108	113	1,040
77	Tailors, milliners, dressmakers, darners, and embroiderers on linen.	48,458	11,160	230
80	Washing, cleaning and dyeing ..	58,417	7,171	123
	ORDER 14.—FURNITURE INDUSTRIES	1,406	145	103
83	Cabinet makers, carriage painters, etc.	1,118	143	128
	ORDER 15.—BUILDING INDUSTRIES	57,575	4,685	81
85	Lime burners, cement workers ..	684	148	216
87	Stone cutters and dressers ..	383	177	462
89	Builders (other than buildings made of bamboo or similar materials), painters, decorators of houses, tilers, plumbers, etc.	19,387	2,550	132
	ORDER 18.—OTHER MISCELLANEOUS AND UNDEFINED INDUSTRIES.	229,420	114,391	499
100	Toy, kite, cage, fishing tackle, etc. makers, taxidermists, etc.	3,135	661	211
101	Others, including managers, persons (other than performers) employed in theatres and other places of public entertainments, employees of public societies, race course service, huntsmen, etc.	684	210	307
102	Contractors for the disposal of refuse, dust, etc.	466	402	863
103	Sweepers, scavengers, etc. ..	168,442	112,342	667
	SUB-CLASS IV.—TRANSPORT ..	179,261	4,480	25
	ORDER 20.—TRANSPORT BY WATER	19,9[illegible]	830	42
109	Labourers employed on the construction and maintenance of streams, rivers and canals.	2,541	307	121
	SUB-CLASS V.—TRADE ..	550,294	33,134	60
	ORDER 28.—TRADE IN WOOD ..	6,345	867	137
125	Trade in wood (not firewood) cork, bark, bamboo thatch, etc.	6,345	867	137
	ORDER 29.—TRADE IN METALS			
126	Trade in metals, machinery, knives, tools, etc.	1,191	544	457
	ORDER 33.—OTHER TRADE IN FOOD STUFFS.	297,959	19,984	67
133	Sellers of milk, butter, ghee, poultry, eggs, etc.	11,170	1,798	161
135	Cardamom, betel-leaf, vegetables, fruit and arecanut sellers	24,706	8,637	350
139	Dealers in hay, grass and fodder ..	5,836	2,671	458
	ORDER 35.—TRADE IN FURNITURE..	4,443	226	51
141	Trade in furniture, carpets, curtains and bedding.	1,779	190	107

(OCCUPATIONAL)—SUBSIDIARY TABLE VI.

Occupations of females by sub-classes and selected orders and groups—*contd.*

Group.	Occupation.	Number of actual workers.		Number of females per 1,000 males.
		Males.	Females.	
1	2	3	4	5
	ORDER 36.—TRADE IN BUILDING MATERIALS.			
143	Trade in building materials other than bricks, tiles and wooden materials.	431	81	188
	ORDER 38.—TRADE IN FUEL			
147	Dealers in firewood, charcoal, coal, cowdung, etc.	2,078	444	214
	ORDER 39.—TRADE IN ARTICLES OF LUXURY AND THOSE PERTAINING TO LETTERS, AND THE ARTS AND SCIENCES.	5,754	959	167
149	Dealers in common bangles, beads, necklaces, fans, small articles, toys, hunting and fishing tackle, flowers, etc.	4,621	940	203
	SUB-CLASS VII.—PUBLIC ADMINISTRATION.	55,936	877	16
	SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS.	174,739	25,208	144
	ORDER 46.—RELIGION	105,492	14,219	135
165	Priests, ministers, etc.	93,492	12,629	135
167	Catechists, readers, church and mission service	2,460	250	104
168	Temple, burial or burning ground service, pilgrim conductors, circumcisers.	7,520	1,242	165
	ORDER 48.—MEDICINE	12,137	5,471	451
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	3,366	5,103	1,516
	ORDER 50.—LETTERS AND ARTS AND SCIENCES.	31,772	3,583	113
178	Music composers and masters, players of all kinds of musical instruments (not military), singers, actors dancers.	21,364	3,284	154

Group.	Occupation.	Number of actual workers.		Number of females per 1,000 males.
		Males.	Females.	
1	2	3	4	5
	SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME.			
	ORDER 51.—PERSONS LIVING PRINCIPALLY ON THEIR INCOME.	19.260	4,638	241
180	Proprietors (other than of agricultural land) fund and scholarship-holders and pensioners.			
	SUB-CLASS X.—DOMESTIC SERVICE (ORDER 52).	226,286	52,619	233
181	Cooks, water carriers, doorkeepers, watchmen and other in-door servants.	207,806	52,619	253
	SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS.	197,404	41,984	213
	ORDER 53.—GENERAL TERMS WHICH DO NOT INDICATE A DEFINITE OCCUPATION.	179,337	41,235	230
187	Labourers and workmen otherwise unspecified.			
	SUB-CLASS XII.—UNPRODUCTIVE.	22,187	42,853	193
	ORDER 55.—BEGGARS, VAGRANTS, PROSTITUTES.	208,896	42,633	204
189	Beggars, vagrants, witches, wizards, etc.	208,784	41,631	199
A	Do. (professional beggars) ..	207,155	41,346	200
B	Do. (others)	1,629	285	175
190	Procurers and prostitutes	112	1,002	8,946
191	ORDER 56.—OTHER UNCLASSIFIED NON-PRODUCTIVE INDUSTRIES.	4	2	500

(OCCUPATIONAL)—SUBSIDIARY TABLE VI.

Occupations of females by sub-classes and selected orders and groups—*concluded.*

Group.	Occupation.	Actual workers. Males.	Actual workers. Females.	Number of females per 1,000 males.
1	2	3	4	5
	DELHI.			
	SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION.	40,864	3,275	80
	ORDER 1.—PASTURE AND AGRICULTURE.	40,711	3,272	80
	(a) Ordinary cultivation	*38,012*	*3,012*	*79*
1	Income from rent of land	728	249	342
4	Farm servants	881	114	129
5	Field labourers	3,297	637	193
	(c) Forestry	*279*	*100*	*358*
9	Woodcutters, firewood, catechu, rubber, etc., collectors and charcoal burners.	277	100	361
	(d) Raising of farm stock	*1,204*	*68*	*56*
11	Cattle and buffalo breeders and keepers.	178	19	107
	SUB-CLASS II.—EXPLOITATION OF MINERALS.	190	8	42
	SUB-CLASS III.—INDUSTRY ..	50,583	10,570	209
	ORDER 6.—TEXTILES	5,672	1,167	206
26	Cotton spinning	587	377	642
27	Cotton sizing and weaving ..	2,621	511	195
32	Weaving of woollen blankets ..	3	28	9,333
38	Lace, crepe, embroideries, fringers, etc., and insufficiently described textiles industries.	1,270	214	169
	ORDER 7.—HIDES, SKINS AND HARD MATERIALS FROM THE ANIMAL KINGDOM.	2,393	271	113
39	Tanners, curriers, leather dressers and leather dyers, etc.	1,703	259	152
	ORDER 8.—WOOD	2,878	179	62
45	Basket makers and other industries of wooden material including leaves and thatchers, and building working with bamboo and reeds, and similar materials.	557	134	241
	ORDER 10.—CERAMICS	3,557	657	185
55	Potters and earthen pipe and bowl makers.	1,774	195	110
56	Brick and tile makers	1,586	462	291
	ORDER 12.—FOOD INDUSTRIES ..	2,463	414	168
65	Rice pounders and huskers and flour grinders.	428	370	864
67	Grain parchers, etc.	139	28	201
	ORDER 13.—INDUSTRIES OF DRESS AND THE TOILET.	10,278	3,354	326
77	Tailors, milliners, dress makers, darners, and embroiderers on linen.	1,248	393	315
78	Shoe, boot and sandal makers ..	4,679	2,251	481
80	Washing, cleaning and dyeing ..	1,877	393	209
81	Barbers, hairdressers, and wigmakers	1,780	303	170
	ORDER 15.—BUILDING INDUSTRIES	7,168	1,600	223
86	Excavators and well sinkers ..	4	7	1,750
89	Builders (other than buildings made of bamboo or similar materials), painters, decorators of houses tilers, plumbers, etc.	1,723	1,508	875
	ORDER 18.—OTHER MISCELLANEOUS AND UNDEFINED INDUSTRIES.	9,360	2,831	302
103	Sweepers and scavengers, etc. ..	4,778	2,737	573
	SUB-CLASS IV.—TRANSPORT ..	14,516	178	12
	ORDER 21.—TRANSPORT BY ROAD ..	5,929	133	22
112	Labourers employed on roads and bridges.	16	6	375
113	Owners, managers and employees (excluding personal servants) connected with mechanically driven vehicles (including trams)	86	8	93

Group.	Occupation.	Actual workers. Males.	Actual workers. Females.	Number of female per 1,000 males.
1	2	3	4	5
	SUB-CLASS V.—TRADE ..	32,289	1,200	37
	ORDER 33.—OTHER TRADE IN FOOD STUFFS.	11,002	668	61
135	Cardamom, betel leaf, vegetables, fruit, and arecanut sellers.	2,431	270	111
139	*Dealers in hay, grass and fodder* ..	170	*131*	771
	ORDER 38.—TRADE IN FUEL.			
147	(Dealers in firewood, charcoal, coal, cowdung, etc.)	284	53	187
	ORDER 39.—TRADE IN ARTICLES OF LUXURY AND THOSE PERTAINING TO LETTERS AND THE ARTS AND SCIENCES.	1,234	107	87
150	Publishers, booksellers, stationers, dealers in music, pictures, musical instruments and curiosities.	414	58	140
	SUB-CLASS VII.—PUBLIC ADMINISTRATION.	4,878	32	7
	SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS.	5,230	1,376	263
	ORDER 46.—RELIGION	1,981	678	342
165	Priests, ministers, etc.	853	496	581
167	Catechists, readers, church and mission service.	29	5	172
168	Temple, burial or burning ground service, pilgrim conductors, circumcisers.	1,099	135	123
	ORDER 48.—MEDICINE	984	339	345
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	416	296	712
	ORDER 49.—INSTRUCTION ..	1,043	147	141
173	Professors and teachers of all kinds	747	133	178
	ORDER 50.—LETTERS AND ARTS AND SCIENCES.	893	212	237
178	Music composers and masters, players on all kinds of musical instruments (not military) singers, actors, and dancers.	531	206	388
179	Conjurors, acrobats, fortune-tellers, reciters, exhibitors of curiosities and wild animals.	34	5	147
	SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME.			
	ORDER 51.—PERSONS LIVING PRINCIPALLY ON THEIR INCOME			
180	Proprietors (other than of agricultural land) fund and scholarship-holders and pensioners.	1,212	723	597
	SUB-CLASS X.—DOMESTIC SERVICE (ORDER 52).	11,990	1,709	143
181	Cooks, water carriers, doorkeepers, watchmen and other indoor servants.	9,661	1,709	177
	SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS	10,360	2,648	256
	(ORDER 53.—GENERAL TERMS WHICH DO NOT INDICATE A DEFINITE OCCUPATION.)			
187	Labourers and workmen otherwise unspecified.	8,193	2,613	319
	SUB-CLASS XII.—UNPRODUCTIVE.	2,060	588	285
	ORDER 55.—BEGGARS, VAGRANTS, PROSTITUTES.	*2,018*	*588*	*291*
189	Beggars, vagrants, witches, wizards, etc.	2,018	426	211
A.	Do. (professional beggars) ..	1,723	411	239

(OCCUPATIONAL)—SUBSIDIARY TABLE VII.

Selected occupations 1921, 1911 and 1901.

Group No.	OCCUPATION.	PUNJAB. Population supported in 1921.	DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1911.	PUNJAB AND DELHI. Population supported in 1901.	Percentage of variation 1911—1921
	1	2	3	4	5	6	7
	CLASS A.—PRODUCTION OF RAW MATERIALS. ..	**15,213,502**	**143,050**	**15,356,552**	**14,538,276**	**14,169,329**	**+5·6**
	SUB-CLASS I.—EXPLOITATION OF ANIMALS AND VEGETATION.	**15,191,205**	**142,310**	**15,333,515**	**14,502,144**	**14,152,642**	**+5·7**
	ORDER 1.—PASTURE AND AGRICULTURE	*15,176,953*	*141,702*	*15,318,655*	*14,489,845*	*14,142,156*	+5·7
	(a) *Ordinary Cultivation*	14,775,303	135,493	14,910,796	14,016,144	13,887,950	+6·4
1	Income from rent of land	1,008,172	4,764	1,012,936	625,869	8,915,669	+61·8
2	Ordinary cultivators	12,619,613	118,486	12,738,099	12,188,142	4,537,431	+4·5
3	Agents, managers of landed estates (not planters), clerks, rent-collectors.	13,579	23	13,602	9,946	1,107	+36·8
4	Farm servants	506,252	2,589	508,841	1,192,187	433,653	−3·9
5	Field labourers	627,687	9,631	637,318			
	(b) *Growers of special products and market gardening* ..	28,938	3,171	32,109	20,832	23,649	+54·1
6	Tea, coffe, cinchona, rubber, indigo plantations ..	4,130	..	4,130	711	6,273	+480.9
7	Fruit, flower, vegetable, betel, vine, arecanut, etc. growers.	24,808	3,171	27,979	20,121	17,376	+39·1
	(c) *Forestry*	22,513	643	23,156	46,081	20,832	−49·7
9	Wood cutters, firewood, catechu, rubber, etc. collectors and charcoal burners., ...	18,297	639	18,936	40,593	15,315	−53·3
10	Lac collectors	4	..	4			
	(d) *Raising of Farm stock*	350,158	2,395	352,553	406,766	209,723	−13·3
11	Cattle, buffalo breeders and keepers	75,021	387	75,408	39,444	19,322	+91·2
12	Sheep, goat and pig breeders	12,333	179	12,512	6,328	22,853	+97·7
13	Breeders of other animals (horses, mules, camels, asses, etc.)	1,883	..	1,883	2,096	7,525	−10·2
14	Herdsmen, shepherds, goat-herds, etc.	260,921	1,829	262,750	358,898	160,023	−26·8
	ORDER 2.—FISHING AND HUNTING	*14,252*	*608*	*14,860*	*12,299*	*10,486*	+20·8
17	Fishing	12,078	358	12,436	10,162	7,326	+22·4
18	Hunting	2,174	250	2,424	2,137	3,160	+13·4
	SUB-CLASS II.—EXPLOITATION OF MINERALS.	**22,297**	**740**	**23,037**	**36,132**	**16,687**	**−36·2**
	ORDER 3.—MINES	*2,801*	7	*2,808*	*3,715*	2,422	−24·4
19	Coal Mines	2,779	7	2,786	3,489	2,408	−20·1
22	ORDER 4.—QUARRIES OF HARD ROCKS—(Other minerals, jade, diamonds, limestone, etc.).	*8,597*	*336*	*8,933*	*16,119*	*8,493*	−44·6
	ORDER 5.—SALT, ETC.	*10,899*	*397*	*11,296*	*16,298*	*5,772*	−30·7
23	Rock, sea and marsh salt	2,383	..	2,383	4,752	54	−49·9
24	Extraction of saltpetre, alum and other substances soluble in water.	8,516	397	8,913	11,546	5,718	−22·8
	CLASS B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	**7,044,618**	**256,314**	**7,300,932**	**7,179,758**	**7,200,110**	**+1·7**
	SUB-CLASS III.—INDUSTRY	**4,834,248**	**150,766**	**4,985,014**	**4,915,027**	**5,145,087**	**+1·4**
	ORDER 6.—TEXTILES	*1,015,603*	*17,470*	*1,033,073*	*1,087,888*	*1,304,624*	−5
25	Cotton ginning, cleaning and pressing	91,886	1,096	92,982	89,743	139,301	+3·6
26	Cotton spinning	108,201	2,959	111,160	883,156	959,688	−1
27	Cotton sizing and weaving	756,001	7,584	763,585			
28	Jute spinning, pressing and weaving	1,168	139	1,307	1,449	1	−9·8
29	Rope, twine and string	31,569	329	31,898	8,349	23,979	+282·1
30	Other fibres (cocoanut, aloes, flax, hemp, straw, etc). ..	700	..	700	32,223	1,232	−97·8
31	Wool, carding and spinning	897	1	898	17,023	32,361	−36·4
32	Weaving of woollen blankets	9,190	145	9,335			
33	Weaving of woollen carpets	465	127	592			
34	Silk spinners	2,968	402	3,370	13,584	16,885	−62
35	Silk weavers	1,782	14	1,796			
37	Dyeing, bleaching, printing, preparation and sponging of textiles.	7,761	470	8,231	18,786	91,949	−56·2
38	Lace, crepe, embroideries, fringes and insufficiently described textile industries.	3,014	4,204	7,218	23,575	38,628	−69·4
	ORDER 7.—HIDES, SKINS, AND HARD MATERIALS FROM THE ANIMAL KINGDOM.	*67,724*	*5,657*	*73,381*	*91,967*	*318,763*	−20·2
39	Tanners, curriers, leather dressers and leather dyers, etc. ..	53,041	3,354	56,395	77,284	312,250	−27
40	Makers of leather articles such as trunks, water bags, saddlery or harness, etc.	14,238	1,491	15,729	13,891	4,996	+13·2
41	Furriers and persons occupied with feathers and bristles, brush makers.	39	567	606	601	1,003	+·8
42	Bone, ivory, horn, shell, etc., workers (except buttons) ..	406	245	651	191	514	+240·8

(OCCUPATIONAL)—SUBSIDIARY TABLE VII.

Selected occupations 1921, 1911 and 1901—*continued.*

Group No.	OCCUPATION.	PUNJAB. Population supported in 1921.	DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1911.	PUNJAB AND DELHI. Population supported in 1901.	Percentage of variation 1911—1921
	1	2	3	4	5	6	7
	ORDER 8.—WOOD	*508,258*	*6,935*	*515,193*	*484,749*	*374,926*	*+6·3*
43	Sawyers	12,686	86	12,772	380,649	275,420	+11·9
44	Carpenters, turners and joiners	407,267	5,819	413,086			
45	Basket makers, and other industries of woody material including leaves and thatchers and builders working with bamboo, reeds or other similar materials	88,305	1,030	89,335	104,100	99,506	−14·2
	ORDER 9.—METALS	*239,156*	*9,814*	*248,970*	*240,096*	*326,625*	*+3·7*
46	Forging and rolling of iron and other metals	1,971	532	2,503	937	1,806	+167·1
47	Makers of arms, guns, etc.	252	151	403	115	884	+250·4
48	Other workers in iron and makers of implements and tools principally or exclusively of iron.	211,486	5,942	217,428	217,927	298,775	−·2
49	Workers in brass, copper and bell metal	24,195	2,541	26,736	18,943	19,577	+41·1
	ORDER 10.—CERAMICS	*369,595*	*10,104*	*379,699*	*352,704*	*309,831*	*+7·7*
52	Makers of glass and crystal ware	172	297	409	3,079	7,653	+20·3
53	Makers of glass bangles, glass beeds and necklaces and glass ear-studs etc.	3,236	..	3,236			
55	Potters and earthen pipe and bowl makers	293,443	6,213	299,656	284,496	270,043	+5·3
56	Brick and tile makers	71,658	3,452	75,110	64,788	31,838	+15·9
	ORDER 11.—CHEMICAL PRODUCTS PROPERLY SO-CALLED, AND ANALOGOUS	*155,809*	*4,625*	*160,434*	*128,225*	*127,063*	*+25·1*
60	Manufacture of dyes, paint and ink	355	16	371	644	2,215	−42·4
61	Manufacture and refining of vegetable oils	147,117	2,633	149,750	120,650	114,793	+24·3
62	Manufacture and refining of mineral oils	158	..	158			
	ORDER 12.—FOOD INDUSTRIES	*215,033*	*7,440*	*222,473*	*289,684*	*335,091*	*−23·2*
65	Rice pounders and huskers and flour grinders	69,877	1,496	71,373	113,318	173,458	−37
66	Bakers and biscuit makers	24,128	886	25,014	38,728	38,830	−35·4
67	Grain parchers, etc.	31,299	388	31,687	35,682	53,358	−11·2
68	Butchers	41,701	1,195	42,896	46,456	39,996	−7·7
71	Makers of sugar, molasses and gur	2,995	121	3,116	1,964	3,254	+58·7
72	Sweetmeat makers, preparers of jam and condiments, etc.	42,004	2,534	44,538	51,796	22,411	−14
73	Brewers and distillers	1,944	238	2,182	246	1,765	+787
	ORDER 13.—INDUSTRIES OF DRESS AND THE TOILET	*1,276,750*	*39,145*	*1,315,895*	*1,147,862*	*964,789*	*+14·6*
77	Tailors, milliners, dress makers, darners and embroiderers on linen.	155,789	6,769	162,558	151,966	108,963	+7
78	Shoe, boot and sandal makers	653,893	18,981	672,874	540,490	440,253	+24·5
80	Washing, cleaning and dyeing	186,242	5,575	191,815	177,671	126,146	+8
81	Barbers, hair dressers and wig makers	276,095	5,833	281,928	271,061	282,158	+4
	ORDER 14.—FURNITURE INDUSTRIES	*4,641*	*924*	*5,565*	*8,759*	*3,026*	*−36·5*
83	Cabinet makers, carriage painters, etc.	3,834	902	4,736	8,724	2,251	−45·7
84	Upholsterers, tent makers, etc.	807	22	829	35	775	+2,268·6
	ORDER 15.—BUILDING INDUSTRIES	*159,261*	*18,207*	*177,468*	*272,168*	*132,357*	*−34·8*
85	Lime burners, cement workers	2,088	469	2,557	1,805	3,337	+41·7
86	Excavators and well sinkers	3,734	75	3,809	6,604	5,331	−42·3
87	Stone cutters and dressers	1,494	179	1,673	164,031	106,989	−32·7
88	Brick layers and masons	96,974	11,753	108,727			
89	Builders (other than buildings made of bamboo or similar materials) painters, decorators of houses, tilers, plumbers, etc.	54,971	5,731	60,702	99,728	16,700	−39·1
	ORDER 16.—CONSTRUCTION OF MEANS OF TRANSPORT	*1,184*	*366*	*1,550*	*1,734*	*2,843*	*−10·6*
90	Persons engaged in making, assembling or repairing motor vehicles, cycles.	96	203	299	1,684	2,620	−18·1
91	Carriage, cart, palki, etc. makers and wheelwrights	959	121	1,080			
92	Ship, boat aeroplane builders	129	42	171	50	223	+242
93	ORDER. 17.—PRODUCTION AND TRANSMISSION OF PHYSICAL FORCES (HEAT, LIGHT, ELECTRICITY MOTIVE POWERS, ETC.) (Gas workers and electric light power).	*1,659*	*1,490*	*3,149*	*1,610*	*890*	*+95·6*
	ORDER 18.—OTHER MISCELLANEOUS AND UNDEFINED INDUSTRIES.	*819,575*	*28,589*	*848,164*	*807,581*	*944,960*	*+5*
94	Printers, lithographers, engravers, etc.	3,928	714	4,642	4,869	5,873	−4·7
96	Makers of musical instruments	89	108	197	365	1,102	−46
97	Makers of watches and clocks and optical, photographic, mathematical and surgical instruments.	1,596	335	1,931	1,784	734	+8·2
98	Workers in precious stones and metals, enamellers, imitation jewellery makers, gilders, etc.	175,696	8,252	183,948	190,892	135,240	−3·6
99	Makers of bangles, or beads or necklaces of other materials than glass and makers of spangles, rosaries, lingams and sacred threads.	1,491	988	2,479	8,919	3,560	−72·2
102	Contractors for the disposal of refuse, dust, etc.	1,873	9	1,882	591,270	786,602	+7·7
103	Sweepers, scavengers, etc,	621,573	15,073	636,646			

(OCCUPATIONAL)—SUBSIDIARY TABLE VII.

Selected occupations 1921, 1911 and 1901—*continued.*

Group No.	OCCUPATION.	PUNJAB. Population supported in 1921.	DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1911.	PUNJAB AND DELHI. Population supported in 1901.	Percentage of variation 1911—1921.
	1	2	3	4	5	6	7
	SUB-CLASS IV.—TRANSPORT	**487,660**	**29,926**	**517,586**	**709,130**	**455,809**	**−27·0**
	ORDER 20.—TRANSPORT BY WATER..	*57,388*	*888*	*58,276*	*108,140*	*55,553*	*−46·1*
107	Ship owners and their employees, ship brokers, ship's officers, engineers, mariners and firemen.	239	..	239	491	510	−51·3
108	Persons (other than labourers) employed on the maintenance of streams, harbours, docks, rivers and canals (including construction).	30,047	618	30,665	86,101 (108–109)	31,703 (108–109)	−56·0 (108–109)
109	Labourers employed on the construction and maintenance of streams, harbours, docks, rivers and canals.	6,444	225	6,669			
110	Boat owners, boatmen and towmen	20,647	45	20,692	21,148	21,650	−2·2
	ORDER 21.—TRANSPORT BY ROAD	*246,506*	*13,298*	*259,804*	*427,750*	*288,481*	*−39·3*
111	Persons (other than labourers) employed on the construction and maintenance of roads and bridges.	2,609	88	2,697	41,347 (111–112)	22,938 (111–112)	−77.6 (111–112)
112	Labourers employed on roads and bridges	6,521	59	6,580			
113	Owners, managers and employees (excluding personal servants) connected with mechanically driven vehicles (including trams).	4	160	164	58,919 (113–114)	42,211 (113–114)	−35·2 (113–114)
114	Owners, managers and employees (excluding personal servants) connected with other vehicles	31,960	6,042	38,002			
115	Palki, etc., bearers and owners	1,492	1,881	3,372	2,231	2,044	+51·1
116	Pack, elephant, camel, mule, ass and bullock owners and drivers.	158,519	2,953	161,472	213,618	203,228	−24·4
117	Porters and messengers	45,401	2,115	47,516	111,635	18,063	−57·4
	ORDER 22.—TRANSPORT BY RAIL	*161,827*	*13,824*	*175,651*	*149,453*	*92,819*	*+17·5*
118	Railway employees of all kinds other than coolies ..	126,384	8,222	134,606	149,453 (118–119)	92,819 (118–119)	+17·5 (118–119)
119	Labourers employed on railway construction and maintenance and coolies and porters employed on railway premises.	35,443	5,602	41,045			
120	ORDER 23.—POST OFFICE, TELEGRAPH AND TELEPHONE SERVICES.	*21,656*	*1,916*	*23,572*	*23,787*	*18,953*	*−·9*
	SUB-CLASS V.—TRADE	**1,722,710**	**75,622**	**1,798,332**	**1,555,601**	**1,599,214**	**+15·6**
121	ORDER 24.—BANKS, ESTABLISHMENTS OF CREDIT, EXCHANGE AND INSURANCE (BANK MANAGERS, MONEY-LENDERS, EXCHANGE AND INSURANCE AGENTS, MONEY CHANGERS AND BROKERS AND THEIR EMPLOYEES.)	*161,486*	*5,474*	*166,960*	*193,890*	*179,501*	*−13·9*
122	ORDER 25.—BROKERAGE, COMMISSION AND EXPORT (BROKERS, COMMISSION AGENTS, COMMERCIAL TRAVELLERS, WARE-HOUSE OWNERS AND EMPLOYEES).	*30,759*	*1,760*	*32,519*	*26,282*	*46,017*	*+23·7*
123	ORDER 26.—TRADE IN TEXTILES—(Trade in piece-goods, wool, cotton, silk, hair and other textiles).	*130,020*	*12,312*	*142,332*	*113,260*	*58,773*	*+25·7*
124	ORDER 27.—TRADE IN SKINS, LEATHER AND FURS—(Trade in skins, leather, furs, feathers, horn, etc. and articles made from these).	*26,280*	*749*	*27,029*	*29,762*	*6,482*	*−9·2*
125	ORDER 28.—TRADE IN WOOD—(Trade in wood (not firewood) cork, bark, bamboo, thatch, etc. and articles made from these).	*20,160*	*917*	*21,077*	*17,427*	*13,254*	*+20·9*
126	ORDER 29.—TRADE IN METALS—(Trade in metals, machinery, knives, tools, etc).	*4,565*	*640*	*5,205*	*5,918*	*486*	*−12*
128	ORDER 31.—TRADE IN CHEMICAL PRODUCTS—(Trade in chemical products (drugs, dyes, paints, petroleum, explosive, etc).	*26,593*	*2,145*	*28,738*	*42,420*	*14,610*	*−32·3*
	ORDER 32.—HOTELS, CAFES AND RESTAURANTS ETC. ..	*10,195*	*810*	*11,005*	*9,474*	*12,057*	*+16·2*
129	Vendors of wine, liquors, aerated water and ice, etc. ..	7,928	627	8,555	7,288	3,940	+17·4
130	Owners and managers of hotels, cookshops, sarais, etc., and their employees.	2,267	183	2,450	2,186	8,117	+12·1
	ORDER 33.—OTHER TRADE IN FOOD STUFFS	*916,228*	*28,250*	*944,478*	*277,996*	*717,711*	*+239·7*
131	Fish dealers	1,476	16	1,492	656	3,366	+127·4
132	Grocers and sellers of vegetable oil, salt and other condiments.	675,477	13,834	689,311	5,248	55,364	+13,034·7
133	Sellers of milk, butter, ghee, poultry, eggs, etc. ..	34,816	2,728	37,544	45,529	51,489	−17·5
134	Sellers of sweetmeats, sugar, gur and molasses ..	7,939	1,216	9,155	11,695	34,314	−21·7
135	Cardamom, betel leaf, vegetables, fruit and arecanut sellers	86,432	6,702	93,134	91,240	162,389	+2·1
136	Grain and pulse dealers	69,351	2,137	71,488	90,807	322,893	−21·3
137	Tobacco, opium, ganja, etc., sellers	7,580	761	8,341	7,647	10,006	+9·1
138	Dealers in sheep, goats, pigs	15,621	38	15,659	9,006	35,048	+73·9
139	Dealers in hay, grass, fodder	17,536	818	18,354	16,168	42,842	+13·5
140	ORDER 34.—TRADE IN CLOTHING AND THE TOILET ARTICLES Trade in ready-made clothing and other articles of dress and the toilet (hats, umbrellas, socks, ready-made shoes, perfumes, etc.).	*23,864*	*7,679*	*31,543*	*34,969*	*25,964*	*+9·8*

(OCCUPATIONAL)—SUBSIDIARY TABLE VII.

Selected occupations 1921, 1911 and 1901—*continued.*

Group No.	OCCUPATION.	PUNJAB. Population supported in 1921.	DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1911.	PUNJAB AND DELHI. Population supported in 1901.	Percentage of variation 1911—1921.
	1	2	3	4	5	6	7
	ORDER 35.—TRADE IN FURNITURE	*12,601*	*1,215*	*13,846*	*8,627*	*14,271*	*+60·5*
141	Trade in furniture, carpets, curtains, and bedding ..	5,093	256	5,349	3,230	1,034	+65·6
142	Hardware, cooking utensils, porcelain, crockery, glassware, bottles, articles of gardening, etc.	7,508	989	8,497	5,397	13,237	+57·4
	ORDER 37.—TRADE IN MEANS OF TRANSPORT	*65,658*	*1,272*	*66,930*	*47,397*	*31,767*	*+41·2*
144	Dealers and hirers in mechanical transport, motors, cycles, etc.	516	110	626			
145	Dealers and hirers in other carriages, carts, boats, etc. ..	586	..	586	47,397	31,767	+41·2
146	Dealers and hirers of elephants, camels, horses, cattle, asses, mules etc.	64,556	1,162	65,718			
	ORDER 38.—TRADE IN FUEL	*6,468*	*820*	*7,288*	*23,603*	*9,965*	*−69·1*
147	Dealers in firewood, charcoal, coal, cowdung, etc. ..	6,468	820	7,288	23,603	9,965	−69·1
	ORDER 39.—TRADE IN ARTICLES OF LUXURY AND THOSE PERTAINING TO LETTERS AND THE ARTS AND THE SCIENCES.	*18,037*	*3,315*	*21,352*	*28,702*	*33,271*	*−25·6*
148	Dealers in precious stones, jewellery (real or imitation) clocks and optical instruments, etc.	1,035	762	1,797	9,890	16,309	−82
149	Dealers in common, bangles, bead necklaces, fans, small articles, toys, hunting and fishing tackle, flowers, etc.	14,635	1,489	16,124	15,985	11,150	+·9
150	Publishers, booksellers, stationers, dealers in music, pictures, musical instruments and curiosities.	2,367	1,064	3,431	2,827	5,812	+21·4
	ORDER 40.—TRADE OF OTHER SORTS	*267,369*	*5,246*	*272,615*	*691,809*	*407,116*	*−60·6*
151	Dealers in rags, stable refuse, etc.	570	21	591	157	..	+276·4
152	General storekeepers and shopkeepers otherwise unspecified	254,126	3,407	257,533	676,915	370,331	−62
153	Itinerant traders, pedlars, hawkers, etc.	10,931	1,721	12,652	12,337	31,778	+2·6
154	Other traders (including farmers of pounds, tools and markets).	1,742	97	1,839	2,370	5,007	−22·4
	CLASS C.—PUBLIC ADMINISTRATION AND LIBERAL ARTS.	**958,411**	**35,141**	**993,552**	**1,039,403**	**1,037,334**	**−4·4**
	SUB-CLASS VI.—PUBLIC FORCE	**263,269**	**9,560**	**272,829**	**265,731**	**363,313**	**+2·7**
	ORDER 41.—ARMY	*175,975*	*7,146*	*183,121*	*137,229*	*117,441*	*+33·4*
155	Army (Imperial)	157,471	6,945	164,416	118,217	94,217	+39·1
156	Army (Indian States)	18,504	201	18,705	19,012	23,221	− 1·6
	ORDER 44.—POLICE	*86,977*	*2,414*	*89,391*	*128,502*	*245,831*	*−30·1*
159	Police	60,975	2,244	63,219	67,324	84,471	−6·1
160	Watchmen	26,002	170	26,172	61,178	161,360	−57·2
	SUB-CLASS VII.—PUBLIC ADMINISTRATION	**158,828**	**8,742**	**167,570**	**150,885**	**130,712**	**+11·1**
	ORDER 45.—						
161	Service of the State	82,403	5,657	88,060	55,292	61,509	+59·3
162	Service of Indian or foreign State	30,712	16	30,728	24,681	8,222	+24·5
163	Municipal and other local (not village) service ..	15,974	2,282	18,256	22,250	28,421	−18
164	Village officials and servants other than watchmen ..	29,739	787	30,526	48,662	32,560	−37·3
	SUB-CLASS VIII.—PROFESSIONS AND LIBERAL ARTS.	**536,314**	**16,839**	**553,153**	**622,787**	**543,309**	**−11·2**
	ORDER 46.—RELIGION	*326,034*	*7,478*	*333,512*	*342,553*	*347,396*	*−2·6*
165	Priests, ministers, etc.	294,203	3,695	297,898	313,990	244,148	−5·1
166	Religious mendicants, inmates of monasteries, etc. ..	4,004	1,191	5,195	4,197	27,786	+23·8
167	Catechists, readers, church and mission service	6,220	74	6,294	4,010	31,433	+57
168	Temple, burial or burning ground service, pilgrims, conductors, circumcisers.	21,607	2,518	24,125	20,356	44,029	+18·5
	ORDER 47.—LAW	*19,570*	*962*	*20,532*	*23,046*	*29,955*	*−10·9*
169	Lawyers of all kinds including Kazis, law agents and mukhtiars.	9,301	569	9,870	10,338	15,726	−4·5
170	Lawyers' clerks, petition-writers, etc.	10,269	393	10,662	12,708	14,229	−16·0
	ORDER 48.—MEDICINE	*45,927*	*2,779*	*48,706*	*49,496*	*42,697*	*−1·6*
171	Medical practitioners of all kinds including dentists, occulists and veterinary surgeons.	28,082	1,374	29,456	29,578	26,613	−·4
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	17,845	1,405	19,250	19,918	16,084	−3·4
	ORDER 49.—INSTRUCTION	*55,267*	*3,165*	*58,432*	*40,131*	*27,916*	*+45·6*
173	Professors and teachers of all kinds	52,206	2,140	54,346	40,131	27,015	+45·6
174	Clerks and servants connected with education	3,061	1,025	4,086			
	ORDER 50.—LETTERS AND ARTS AND SCIENCES ..	*89,516*	*2,455*	*91,971*	*107,561*	*95,346*	*−45·1*
177	Authors, editors, journalists, artists, photographers, sculptors, astronomers, meteorologists, botanists, astrologers, etc.	4,827	191	5,018	8,864	18,043	−43·4
178	Music composers and masters, players on all kinds of musical instruments (not military), singers, actors and dancers.	61,066	1,491	62,557	128,071	40,582	−51·2
179	Conjurors, acrobats, fortune tellers, reciters, exhibitors of curiosities and wild animals.	15,405	106	15,511	19,941	17,789	−22·2

(OCCUPATIONAL)—SUBSIDIARY TABLE VII.

Selected occupations 1921, 1911 and 1901—*concluded.*

Group No.	OCCUPATION.	PUNJAB. Population supported in 1921.	DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1921.	PUNJAB AND DELHI. Population supported in 1911.	PUNJAB AND DELHI. Population supported in 1901.	Percentage of variation 1911—1921.
	1	2	3	4	5	6	7
	CLASS D.—MISCELLANEOUS	1,884,529	53,683	1,938,212	1,430,313	2,323,877	+35·5
180	*SUB-CLASS IX.—PERSONS LIVING ON THEIR INCOME.* ORDER 51.—PERSONS LIVING PRINCIPALLY ON THEIR INCOME— Proprietors (other than agricultural land) fund and scholarship-holders and pensioners.	63,915	4,376	68,291	58,971	63,977	+15 8
	SUB-CLASS X.—DOMESTIC SERVICE—ORDER (52)	639,103	23,688	662,791	507,727	594,872	+30·5
181	Cooks, water carriers, doorkeepers, watchmen and other indoor servants.	595,387	20,379	615,766	476,505	568,010	+29·2
182	Private grooms, coachmen, dog boys, etc.	42,283	3,199	45,482	31,222	26,862	+50·6
183	Private motor drivers and cleaners	1,433	110	1,543			
	SUB-CLASS XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS—(ORDER 53.—GENERAL TERMS WHICH DO NOT INDICATE A DEFINITE OCCUPATION.)	572,934	19,989	592,923	264,630	854,164	+124
184	Manufacturers, businessmen and contractors otherwise unspecified.	19,240	1,487	20,727	13,207	16,084	+56·9
185	Cashiers, accountants, book-keepers, clerks and employees in unspecified offices, warehouses and shops.	26,880	2,252	29,132	26,846	85,048	+8·5
187	Labourers and workmen otherwise unspecified	524,533	16,246	540,779	224,144	747,874	+141·3
	SUB-CLASS XII.—UNPRODUCTIVE	608,577	5,630	614,207	598,985	810,864	+2·5
188	ORDER 54.—INMATES OF JAILS, ASYLUMS, AND HOSPITALS .. INMATES OF JAILS, ASYLUMS, AND ALMSHOUSES.	*15,993*	*242*	*16,235*	*14,405*	*18,076*	+*12·7*
	ORDER 55.—BEGGARS, VAGRANTS, PROSTITUTES ..	*592,569*	*5,388*	*597,957*	*584,580*	*792,788*	+*2·3*
	ORDER 56.—OTHER UNCLASSIFIED NON-PRODUCTIVE INDUSTRIES.	*15*	..	*15*			

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes.

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
PUNJAB—		
AGGARWAL (Hindu)—		
I.—Exploitation of animals and vegetation ..	89	12
Income from rent of land	15	37
Cultivators of all kinds	68	9
Others	6	2
III.—Industries	35	193
V.—Trade	791	3
VII.—Public administration	13	..
IX.—Persons living on their income ..	17	17
X.—Domestic service	23	4
Others	82	12
AHIR (Hindu)—		
I.—Exploitation of animals and vegetation	926	31
Cultivators of all kinds	908	31
Raisers of livestock, etc.	14	10
Others	4	26
IV.—Transport	18	1
Labourers, boatmen, etc.	17	1
Others	1	..
X.—Domestic service	11	8
Others	45	18
ARAIN (Musalman)—		
I.—Exploitation of animals and vegetation ..	868	3
Cultivators of all kinds	830	3
Field labourers, wood cutters, etc.	17	2
Raisers of livestock, etc... ..	17	1
Others	4	1
III.—Industries	18	59
IV.—Transport	17	2
Labourers, boatmen, etc.	16	2
Others	1	1
V.—Trade	27	37
XII.—Labourers, unspecified	29	22
Others	41	6
ARORA (Hindu)—		
I.—Exploitation of animals and vegetation ..	148	6
Income from rent of land	53	10
Cultivators of all kinds	85	3
Others	10	4
III.—Industries	49	87
Artisans and other workmen, etc.	48	88
Others	1	2
IV.—Transport	19	1
Labourers, boatmen, etc.	13	2
Others	6	..
V.—Trade	651	2
VI.—Public force	11	..
VII.—Public administration	21	1
VIII.—Arts and professions	14	9
X.—Domestic service	29	5
XII.—Labourers unspecified	40	6
Others	18	18
ARORA (Sikh)—		
I.—Exploitation of animals and vegetation	156	4
Income from rent of land	43	9
Cultivators of all kinds	104	2
Others	9	13
III.—Industries	42	75
IV.—Transport	19	4
Labourers, boatmen, etc.	12	6
Others	7	1
V.—Trade	631	3
VII.—Public administration	20	1
VIII.—Arts and professions	36	6
IX.—Persons living on their income ..	10	28
ARORA SIKH—*concluded.*		
X.—Domestic service	24	5
XII.—Labourers unspecified	37	55
XIII.—Beggars, prostitutes, etc.	12	7
Others	13	5
AWAN (Musalman)—		
I.—Exploitation of animals and vegetation ..	819	7
Cultivators of all kinds	789	7
Raisers of livestock, etc.	10	2
Others	11	2
III.—Industries	31	59
IV.—Transport	26	2
Labourers, boatmen, etc.	23	1
Others	3	6
VI.—Public force	26	..
XII.—Labourers unspecified	23	25
XIII.—Beggars, prostitutes, etc.	18	25
Others	57	9
BARWALA (Musalman)—		
I.—Exploitation of animals and vegetation ..	128	1
Income from rent of land	6	11
Cultivators of all kinds	68	1
Field labourers, wood cutters, etc.	24	..
Raisers of livestock, etc.	28	..
Others	2	2
III.—Industries	345	34
IV.—Transport	18	2
Labourers, boatmen, etc.	16	2
Others	2	..
V.—Trade	23	2
VI.—Public force	9	..
X.—Domestic service	354	6
XII.—Labourers unspecified	60	68
XIII.—Beggars, prostitutes, etc.	24	13
Others	39	26
BAWARIA (Hindu)—		
I.—Exploitation of animals and vegetation	614	10
Income from rent of land	10	13
Cultivators of all kinds	396	6
Field labourers, wood cutters, etc.	157	20
Raisers of livestock, etc.	45	6
Others	6	114
III.—Industries	50	65
IV.—Transport	26	9
V.—Trade	15	50
VI.—Public force	22	..
XII.—Labourers unspecified	106	50
XIII.—*Beggars, prostitutes, criminals and inmates of jails and asylums*	145	19
Others	22	29
BHARAI (Musalman)—		
I.—Exploitation of animals and vegetation	316	2
Income from rent of land	21	7
Cultivators of all kinds	186	4
Field labourers, wood cutters, etc.	58	1
Raisers of livestock, etc.	44	1
Others	7	..
III.—Industries	32	135
V.—Trade	17	13
VIII.—Arts and professions	19	25
XII.—Labourers unspecified	27	43
XIII.—*Beggars, prostitutes, criminals and inmates of jails and asylums*	560	6
Others	29	7

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
BILOCH (Musalman)—		
I.—Exploitation of animals and vegetation ..	759	2
Income from rent of land	40	9
Cultivators of all kinds	599	1
Field labourers, wood cutters, etc.	43	2
Raisers of livestock, etc.	74	3
Others	3	24
III.—Industries	30	111
IV.—TRANSPORT	107	12
X.—Domestic service	14	10
XII.—Labourers unspecified	45	33
XIII.—Beggars, prostitutes, etc.	20	14
Others	25	4
BRAHMAN (Hindu)—		
I.—Exploitation of animals and vegetation ..	539	22
Income from rent of land	40	43
Cultivators of all kinds	472	21
Field labourers, wood cutters, etc.	10	17
Raisers of livestock, etc.	15	9
Others	2	2
III.—Industries	22	60
Artisans and other workmen	21	6
Others	1	2
IV.—Transport	21	1
Labourers, boatmen, etc.	16	1
Others	5	1
V.—Trade	86	2
VI.—Public force	12	..
VII.—Public administration	19	1
VIII.—Arts and professions	220	15
Religion	*202*	*19*
Others	18	4
X.—Domestic service	35	8
XII.—Labourers unspecified	10	24
XIII.—Beggars, prostitutes, etc.	26	3
Others	10	12
CHAMAR (Hindu)—		
I.—Exploitation of animals and vegetation ..	426	20
Income from rent of land	4	15
Cultivators of all kinds	211	20
Field labourers, wood cutters, etc.	171	23
Raisers of livestock, etc.	35	4
Others	5	26
III.—INDUSTRIES	482	19
IV.—Transport	11	11
XII.—Labourers unspecified	49	26
Others	32	30
CHAMAR (Sikh)—		
I.—Exploitation of animals and vegetation ..	877	6
Income from rent of land	5	10
Cultivators of all kinds	160	11
Field labourers, wood cutters, etc.	164	2
Raisers of livestock, etc.	[illegible]	1
Others	[illegible]	..
III.—INDUSTRIES	11	18
Artisans and other workmen	610	18
Others	1	..
IV.—Transport	14	29
Labourers, boatmen, etc.	12	17
Others	2	339
XII.—Labourers unspecified	58	39
XIII.—Beggars, prostitutes, etc.	10	16
Others	30	8
CHHIMBA (Hindu)—		
I.—Exploitation of animals and vegetation ..	213	9
Income from rent of land	6	40
Cultivators of all kinds	162	10
Field labourers, wood cutters, etc.	27	2
Raisers of livestock, etc.	13	1
Others	5	1
CHHIMBA (Hindu)—*concluded.*		
III.—Industries	695	14
Artisans and other workmen	*695*	*14*
IV.—Transport	9	1
V.—Trade	36	3
XII.—Labourers unspecified	14	61
Others	33	9
CHHIMBA (Sikh)—		
I.—Exploitation of animals and vegetation	308	2
Income from rent of land	28	14
Cultivators of all kinds	230	1
Field labourers, wood cutters, etc.	37	1
Raisers of livestock, etc.	11	..
Others	2	..
III.—Industries	608	9
Artisans and other workmen	*585*	*10*
Others	21	2
V.—Trade	25	2
Others	61	8
CHHIMBA (Musalman)—		
I.—Exploitation of animals and vegetation	278	3
Income from rent of land	13	11
Cultivators of all kinds	179	4
Field labourers, wood cutters, etc.	55	1
Raisers of livestock, etc.	25	1
Others	6	..
III.—Industries	616	15
Artisans and other workmen	*615*	*15*
Others	1	..
IV.—Transport	14	..
Labourers, boatmen, etc.	13	..
Others	1	..
V.—Trade	16	4
X.—Domestic service	10	1
XII.—Labourers unspecified	35	28
XIII.—Beggars, prostitutes, etc.	9	9
Others	22	5
CHUHRA (Hindu)—		
I.—Exploitation of animals and vegetation	239	2
Cultivators of all kinds	74	2
Field labourers, wood cutters, etc.	136	1
Raisers of livestock, etc.	24	1
Others	5	4
III.—Industries	677	63
Artisans and other workmen	*677*	*63*
XII.—Labourers unspecified	40	20
XIII.—Beggars, prostitutes, etc.	11	6
Others	38	9
CHUHRA (Sikh)—		
I.—Exploitation of animals and vegetation	558	1
Cultivators of all kinds	129	1
Field labourers, wood cutters, etc.	348	1
Raisers of livestock, etc.	77	1
Others	2	15
III.—Industries	318	55
Artisans and other workmen	*318*	*55*
VI.—Public force	16	..
XII.—Labourers unspecified	59	20
XIII.—Beggars, prostitutes, etc.	14	17
Others	87	7
DAGI AND KOLI (Hindu)—		
I.—Exploitation of animals and vegetation	953	48
Cultivators of all kinds	*908*	*48*
Field labourers, wood cutters, etc.	25	55
Raisers of livestock, etc.	19	50
Others	1	13
III.—Industries	21	36
Artisans and other workmen	21	36
Others	26	21

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—continued.

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
DHANAK (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	315	24
Income from rent of land	2	4
Cultivators of all kinds	123	23
Field labourers, wood cutters, etc.	118	35
Raisers of livestock, etc.	66	12
Others	6	1
III.—INDUSTRIES	353	15
IV.—TRANSPORT	14	18
X.—DOMESTIC SERIVCE	220	79
XII.—LABOURERS UNSPECIFIED	52	62
OTHERS	46	43
DHOBI (MUSALMAN).—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	172	2
Income from rent of land	7	13
Cultivators of all kinds	128	1
Field labourers, wood cutters, etc.	23	2
Raisers of livestock, etc.	13	4
Others	1	..
III.—INDUSTRIES	740	16
Artisans and other workmen	*740*	*16*
X.—DOMESTIC SERVICE	11	16
XII.—LABOURERS UNSPECIFIED	29	43
XIII.—BEGGARS, PROSTITUTES, ETC.	15	19
OTHERS	33	9
DOGAR (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	947	3
Cultivators of all kinds	*895*	*4*
Field labourers, wood cutters, etc.	11	7
Raisers of livestock, etc.	40	..
Others	1	..
OTHERS	53	21
FAQIR (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	291	1
Income from rent of land	17	14
Cultivators of all kinds	199	3
Field labourers, wood cutters, etc.	46	6
Raisers of livestock, etc.	29	1
Others	1	12
III.—INDUSTRIES	35	65
IV.—TRANSPORT	14	..
V.—TRADE	16	5
VIII.—ARTS AND PROFESSIONS	30	7
Religion	20	4
Others	10	58
X.—DOMESTIC SERVICE	13	7
XII.—LABOURERS UNSPECIFIED	21	19
XIII.—BEGGARS, PROSTITUTES, CRIMINALS AND INMATES OF JAILS AND ASYLUMS	566	10
OTHERS	14	4
GHIRATH (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	928	27
Cultivators of all kinds	*893*	*25*
Field labourers, wood cutters, etc.	13	14
Raisers of livestock, etc.	15	13
Others	7	..
OTHERS	72	12
GUJJAR (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	911	12
Cultivators of all kinds	*904*	*14*
Field labourers, wood cutters, etc.	6	9
Others	1	2
III.—INDUSTRIES	23	188
IV.—TRANSPORT	14	2
X.—DOMESTIC SERVICE	10	10
XII.—LABOURERS UNSPECIFIED	27	18
OTHERS	15	10
GUJJAR (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	907	7
Cultivators of all kinds	*893*	*7*
Others	14	3
IV.—TRANSPORT	15	..
XII.—LABOURERS UNSPECIFIED	16	24
OTHERS	62	17
HARNI (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	547	5
Income from rent of land	26	25
Cultivators of all kinds	440	5
Field labourers, wood cutters, etc.	43	2
Raisers of livestock, etc.	37	..
Others	1	..
III.—INDUSTRIES	12	50
IV.—TRANSPORT	18	..
V.—TRADE	54	30
XII.—LABOURERS UNSPECIFIED	42	28
XIII.—BEGGARS, PROSTITUTES, CRIMINALS, AND INMATES OF JAILS AND ASYLUMS.	309	6
OTHERS	18	55
JAT (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	959	13
Cultivators of all kinds	*937*	*13*
Raisers of livestock, etc.	19	10
Others	3	2
OTHERS	41	13
JAT (SIKH)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	960	4
Cultivators of all kinds	*930*	*4*
Raisers of livestock, etc.	15	..
Others	6	1
VI.—PUBLIC FORCE	12	..
OTHERS	28	11
JAT (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	862	3
Cultivators of all kinds	*795*	*3*
Field labourers, wood cutters, etc.	*24*	*1*
Raisers of livestock, etc.	42	2
Others	1	1
III.—INDUSTRIES	27	45
IV.—TRANSPORT	21	2
Labourers, boatmen, etc.	20	2
Others	1	1
X.—DOMESTIC SERVICE	*11*	9
XII.—LABOURERS UNSPECIFIED	31	16
XIII.—BEGGARS, PROSTITUTES, ETC.	18	15
OTHERS	30	4
JHIWAR (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	209	13
Income from rent of land	11	17
Cultivators of all kinds	*123*	9
Field labourers, wood cutters, etc.	55	8
Raisers of livestock, etc.	14	2
Others	6	6
III.—INDUSTRIES	68	29
Artisans and other workmen	62	29
Others	1	3
IV.—TRANSPORT	16	3
Labourers, boatmen, etc.	*14*	4
Others	2	1
V.—TRADE	30	15
X.—DOMESTIC SERVICE	633	51
XII.—LABOURERS UNSPECIFIED	27	15
OTHERS	22	10

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
JHIWAR (Sikh)—		
I.—Exploitation of animals and vegetation	105	2
Income from rent of land	5	14
Cultivators of all kinds	82	1
Field labourers, wood cutters, etc.	12	2
Others	6	1
III.—Industries	25	33
IV.—Transport	9	..
V.—Trade	23	..
X.—DOMESTIC SERVICE	789	56
Others	49	24
JHIWAR (Musalman)—		
I.—Exploitation of animals and vegetation	124	3
Cultivators of all kinds	80	3
Field labourers, wood cutters, etc.	21	2
Others	23	2
III.—Industries	54	78
IV.—Transport	20	1
Labourers and boatmen, etc.	17	1
Others	3	221
V.—Trade	18	5
X.—DOMESTIC SERVICE	715	57
XII.—Labourers unspecified	36	90
XIII.—Beggars, prostitutes, etc.	9	46
Others	24	37
JULAHA (Hindu)—		
I.—Exploitation of animals and vegetation	384	35
Income from rent of land	15	743
Cultivators of all kinds	285	30
Field labourers, wood cutters, etc.	51	32
Raisers of livestock, etc.	26	19
Others	7	156
II.—Extraction of minerals	15	29
III.—Industries	465	40
Artisans and other workmen	*463*	*40*
Others	2	109
IV.—Transport	23	19
V.—Trade	10	23
X.—Domestic service	18	14
XII.—Labourers unspecified	61	33
Others	24	45
JULAHA (Musalman)—		
I.—Exploitation of animals and vegetation	124	3
Income from rent of land	5	14
Cultivators of all kinds	77	4
Field labourers, wood cutters, etc.	21	2
Raisers of livestock, etc.	20	1
Others	1	4
III.—Industries	782	24
Artisans and other workmen	*782*	*24*
IV.—Transport	11	2
V.—Trade	11	5
X.—Domestic service	14	15
XII.—Labourers unspecified	22	47
XIII.—Beggars, prostitutes, etc.	13	32
Others	23	14
KAMBOH (Kamboj) Sikh—		
I.—Exploitation of animals and vegetation	981	2
Cultivators of all kinds	*902*	*2*
Raisers of livestock, etc.	25	..
Others	4	..
XII.—Labourers unspecified	10	75
Others	59	13

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
KAMBOH (Kamboj) Musalman—		
I.—Exploitation of animals and vegetation	822	3
Cultivators of all kinds	*767*	*3*
Field labourers, wood cutters, etc.	21	7
Raisers of livestock, etc.	32	4
Others	2	2
III.—Industries	36	62
Artisans and other workmen	35	65
Others	1	4
IV.—Transport	32	1
V.—Trade	32	23
X.—Domestic service	10	2
XII.—Labourers unspecified	31	23
XIII.—Beggars, prostitutes, etc.	11	16
Others	26	5
KANET (Hindu)—		
I.—Exploitation of animals and vegetation	972	49
Cultivators of all kinds	*942*	*49*
Field labourers, wood cutters, etc.	7	80
Raisers of livestock, etc.	20	55
Others	3	2
Others	28	17
KASHMIRI (Musalman)—		
I.—Exploitation of animals and vegetation	161	4
Income from rent of land	14	23
Cultivators of all kinds	117	4
Field labourers, wood cutters, etc.	15	1
Raisers of livestock, etc.	14	1
Others	1	..
III.—INDUSTRIES	*549*	13
Artisans and other workmen	547	6
Others	2	1
IV.—Transport	62	1
Labourers and boatmen	59	1
Others	3	1
V.—Trade	55	3
X.—Domestic service	28	13
XII.—Labourers unspecified	64	29
XIII.—Beggars, prostitutes, etc.	19	39
Others	62	12
KHATRI (Hindu)—		
I.—Exploitation of animals and vegetation	104	11
Income from rent of land	36	22
Cultivators of all kinds	56	6
Raisers of livestock, etc.	5	2
Others	7	2
III.—Industries	64	52
Artisans and other workmen	61	55
Others	3	7
IV.—Transport	46	1
Labourers, boatmen, etc.	27	1
Others	19	..
V.—Trade	580	2
VII.—Public administration	47	..
VIII.—Arts and professions	32	6
Lawyers, doctors and teachers, etc.	25	4
Others	7	12
IX.—Persons living on their income	16	26
X.—Domestic service	41	5
Others	70	16
KHATRI (Sikh)—		
I.—Exploitation of animals and vegetation	224	9
Income from rent of land	84	21
Cultivators of all kinds	132	4
Field labourers, wood cutters, etc.	5	5
Others	3	1

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
KHATRI (Sikh)—*concluded.*		
III.—Industries	60	56
Artisans and other workmen	59	56
Others	1	6
IV.—Transport	36	2
Labourers, boatmen, etc.	24	1
Others	12	2
V.—TRADE	459	4
VII.—Public administration	40	..
VIII.—Arts and professions	52	7
Lawyers, doctors, teachers, etc.	25	6
Others	27	8
IX.—Persons living on their income ..	29	18
X.—Domestic service	25	8
Others	75	16
KHOJA (Musalman)—		
I.—Exploitation of animals and vegetation	202	3
Income from rent of land	16	13
Cultivators of all kinds	119	2
Field labourers, wood cutters, etc.	49	1
Raisers of livestock, etc.	15	1
Others	3	17
III.—Industries	135	23
V.—TRADE	502	2
XII.—Labourers unspecified	68	12
XIII.—Beggars, prostitutes, etc.	25	5
Others	68	6
KHOKHAR (Musalman)—		
I.—Exploitation of animals and vegetation	700	6
Cultivators of all kinds	*629*	7
Field labourers, wood cutters, etc.	14	3
Raisers of livestock, etc.	56	2
Others	1	18
II.—Extraction of Minerals	13	275
III.—Industries	85	18
IV.—Transport	24	2
V.—Trade	13	8
VIII.—Arts and professions	14	11
Lawyers, doctors, and teachers, etc.	10	8
Others	4	20
X.—Domestic service	28	14
XII.—Labourers unspecified	52	20
XIII.—Beggars, prostitutes, etc.	43	14
Others	28	4
KUMHAR (Hindu)—		
I.—Exploitation of animals and vegetation	293	19
Income from rent of land	6	14
Cultivators of all kinds	240	20
Field labourers, wood cutters, etc.	23	18
Raisers of livestock, etc.	22	15
Others	2	3
II.—Extraction of Minerals	22	10
III.—Industries	540	17
Artisans and other workmen	*539*	*17*
Others	1	9
IV.—Transport	67	6
V.—Trade	30	13
XII.—Labourers unspecified	29	23
Others	19	18
KUMHAR (Musalman)—		
I.—Exploitation of animals and vegetation	184	2
Income from rent of land	11	8
Cultivators of all kinds	123	2
Field labourers, wood cutters, etc.	32	1
Others	18	2
KUMHAR (Musalman)—*concluded.*		
III.—Industries	632	8
Artisans and other workmen	*632*	*8*
IV.—Transport	66	1
V.—Trade	34	6
X.—Domestic service	9	18
XII.—Labourers unspecified	47	34
XIII.—Beggars, prostitutes, etc.	12	25
Others	16	13
LOHAR (Hindu)—		
I.—Exploitation of animals and vegetation	417	88
Income from rent of land	12	42
Cultivators of all kinds	357	34
Field labourers, wood cutters, etc.	29	25
Raisers of livestock, etc.	18	21
Others	1	47
III.—Industries	538	9
Artisans and other workmen	*538*	*9*
Others	45	22
LOHAR (Musalman)—		
I.—Exploitation of animals and vegetation	201	5
Income from rent of land	15	18
Cultivators of all kinds	145	5
Field labourers, wood cutters, etc.	29	.1
Raisers of livestock, etc.	11	3
Others	1	2
III.—Industries	714	3
Artisans and other workmen	*713*	*33*
Others	1	12
X.—Domestic service	13	9
XII.—Labourers unspecified	19	48
Others	53	9
MACHHI (Musalman)—		
I.—Exploitation of animals and vegetation	221	2
Income from rent of land	10	9
Cultivators of all kinds	154	1
Field labourers, wood cutters, etc.	33	2
Raisers of livestock, etc.	19	1
Others	5	2
III.—Industries	52	61
IV.—Transport	28	1
Labourers, boatmen, etc.	26	1
Others	2	10
V.—Trade	12	5
X.—DOMESTIC SERVICE	599	38
XII.—Labourers unspecified	52	80
XIII.—Beggars, prostitutes, etc.	18	16
Others	28	26
MAHTAM (Sikh)—		
I.—Exploitation of animals and vegetation	924	2
Income from rent of land	11	10
Cultivators of all kinds	838	1
Field labourers, wood cutters, etc.	10	16
Raisers of livestock, etc.	16	5
Fishing and hunting	*49*	*12*
III.—Industries	49	168
Others	27	34
MALI (Hindu)—		
I.—Exploitation of animals and vegetation	831	13
Cultivators of all kinds	*738*	*11*
Field labourers, wood cutters, etc.	64	30
Raisers of livestock, etc.	28	6
Others	1	4
III.—Industries	24	52
V.—Trade	84	284
X.—Domestic service	21	1
Others	40	10

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
MALIAR (Musalman)—		
I.—Exploitation of animals and vegetation	845	6
Cultivators of all kinds	*805*	7
Field labourers, wood cutters, etc.	23	2
Raisers of livestock, etc.	14	9
Others	3	5
III.—Industries	35	71
IV.—Transport	14	7
Labourers, boatmen, etc.	13	8
Others	1	..
X.—Domestic service	13	46
XII.—Labourers unspecified	30	41
XIII.—Beggars, prostitutes, etc.	16	34
Others	47	28
MALLAH (Musalman)—		
I.—Exploitation of animals and vegetation ..	512	2
Income from rent of land	20	14
Cultivators of all kinds	376	1
Field labourers, wood cutters, etc.	50	2
Raisers of livestock, etc.	24	4
Fishing and hunting	39	5
Others	3	11
III.—Industries	104	36
IV.—TRANSPORT	254	3
Labourers, boatmen, etc.	253	3
Others	1	7
XII.—Labourers unspecified	63	26
Others	67	16
MEO (Musalman)—		
I.—Exploitation of animals and vegetation	975	5
Cultivators of all kinds	970	5
Others	5	1
Others	25	37
MIRASI (Musalman)—		
I.—Exploitation of animals and vegetation	74	4
Income from rent of land	4	26
Cultivators of all kinds	46	2
Field labourers, wood cutters, etc.	15	3
Raisers of livestock, etc.	8	3
Others	1	71
III.—Industries	38	41
VIII.—Arts and professions	44	15
X.—Domestic service	23	11
XII.—Labourers unspecified	22	53
XIII.—BEGGARS, PROSTITUTES, CRIMINALS AND INMATES OF JAILS AND ASYLUMS	766	19
Others	33	5
MOCHI (Musalman)—		
I.—Exploitation of animals and vegetation	143	3
Income from rent of land	8	12
Cultivators of all kinds	94	2
Field labourers, wood cutters, etc.	26	2
Raisers of livestock, etc.	14	7
Others	1	1
III.—Industries	776	10
Artisans and other workmen	*774*	*10*
Others	2	2
X.—Domestic service	13	17
XII.—Labourers unspecified	29	90
XIII.—Beggars, prostitutes, etc.	11	29
Others	28	15
MOGHAL (Musalman)—		
I.—Exploitation of animals and vegetation	681	5
Cultivators of all kinds	*656*	*5*
Field labourers, wood cutters, etc.	12	..
Raisers of livestock, etc.	12	..
Others	1	6
III.—Industries	79	31
IV.—Transport	42	1
Labourers, boatmen, etc.	39	..
Others	3	1
V.—Trade	29	3
VI.—Public force	31	..
VII.—Public administration	20	1
VIII.—Arts and professions	20	3
X.—Domestic service	26	8
XII.—Labourers unspecified	30	12
XIII.—Beggars, prostitutes, etc.	22	36
Others	20	28
MUSSALLI (Musalman)—		
I.—Exploitation of animals and vegetation	298	1
Cultivators of all kinds	153	1
Field labourers, wood cutters, etc.	115	2
Raisers of livestock, etc.	19	2
Others	11	5
III.—Industries	418	19
Artisans and other workmen	*418*	*19*
IV.—Transport	14	2
X.—Domestic service	25	9
XII.—Labourers unspecified	152	12
XIII.—Beggars, prostitutes, etc.	72	48
Others	21	12
NAI (Hindu)—		
I.—Exploitation of animals and vegetation	197	16
Income from rent of land	7	26
Cultivators of all kinds	165	16
Field labourers, wood cutters, etc.	12	9
Raisers of livestock, etc.	12	16
Others	1	17
III.—Industries	752	17
Others	51	15
NAI (Sikh)—		
I.—Exploitation of animals and vegetation	287	2
Income from rent of land	18	30
Cultivators of all kinds	238	1
Field labourers, wood cutters, etc.	20	..
Raisers of livestock, etc.	11	..
Others	..	..
III.—INDUSTRIES	662	1
Others	51	8
NAI (Musalman)—		
I.—Exploitation of animals and vegetation	131	4
Income from rent of land	10	15
Cultivators of all kinds	97	3
Field labourers, wood cutters, etc.	15	4
Raisers of livestock, etc.	8	2
Others	1	8
III.—INDUSTRIES	802	9
Others	67	24
PAKHIWARA (Musalman)—		
I.—Exploitation of animals and vegetation	331	1
Income from rent of land	18	7
Cultivators of all kinds	206	..
Field labourers, wood cutters, etc.	20	..
Raisers of livestock, etc.	12	..
Fishing and hunting	62	5
Others	4	..

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
PAKHIWARA (MUSALMAN)—*concluded.*		
III.—INDUSTRIES	43	30
V.—TRADE	150	41
XII.—LABOURERS UNSPECIFIED	150	5
XIII.—BEGGARS, PROSTITUTES, CRIMINALS AND INMATES OF JAILS AND ASYLUMS	301	12
OTHERS	25	29
PATHAN (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	572	8
Cultivators of all kinds	*530*	*5*
Field labourers, wood cutters, etc.	9	10
Raisers of livestock, etc.	25	28
Others	2	..
III.—INDUSTRIES	65	21
Artisans and other workmen	64	21
Others	1	4
IV.—TRANSPORT	50	1
Labourers, boatmen, etc.	45	1
Others	5	1
V.—TRADE	45	2
VI.—PUBLIC FORCE	47	..
VII.—PUBLIC ADMINISTRATION	29	..
X.—DOMESTIC SERVICE	41	8
XII.—LABOURERS UNSPECIFIED	78	9
XIII.—BEGGARS, PROSTITUTES, ETC.	45	18
OTHERS	33	8
QASSAB (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION	201	3
Income from rent of land	14	4
Cultivators of all kinds	115	2
Field labourers, wood cutters, etc.	25	6
Raisers of livestock, etc...	46	1
Others	1	3
III.—INDUSTRIES	484	13
IV.—TRANSPORT	30	1
Labourers, boatmen, etc.	29	1
Others	1	5
V.—TRADE	179	2
XII.—LABOURERS UNSPECIFIED	53	23
OTHERS	53	14
QURESHI (MUSALMAN).—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	627	6
Cultivators of all kinds	*603*	*6*
Field labourers, wood cutters, etc.	10	3
Raisers of livestock, etc.	12	1
Others	2	..
III.—INDUSTRIES	55	37
Artisans and other workmen	55	37
IV.—TRANSPORT	37	2
Labourers, boatmen, etc.	32	1
Others	5	3
V.—TRADE	27	2
VII.—PUBLIC ADMINISTRATION	28	..
VIII.—ARTS AND PROFESSIONS	76	7
Religion	50	6
Others	26	8
XIII.—BEGGARS, PROSTITUTES, ETC.	71	12
OTHERS	81	19
RAJPUT (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	832	19
Cultivators of all kinds	*806*	*19*
Field labourers, wood cutters, etc.	6	5
Raisers of livestock, etc.	16	8
Others	4	1

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
RAJPUT (HINDU)—*concluded.*		
III.—INDUSTRIES	32	15
Artisans and other workmen	31	15
Others	1	2
IV.—TRANSPORT	18	4
Labourers, boatmen, etc.	17	4
Others	1	2
V.—TRADE	15	4
VI.—PUBLIC FORCE	22	..
X.—DOMESTIC SERVICE	24	6
OTHERS	57	17
RAJPUT (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	858	5
Cultivators of all kinds	*822*	*5*
Field labourers, wood cutters, etc.	10	1
Raisers of livestock, etc.	25	1
Others	1	8
III.—INDUSTRIES	31	84
IV.—TRANSPORT	21	2
V.—TRADE	12	..
VI.—PUBLIC FORCE	11	..
VII.—PUBLIC ADMINISTRATION	9	..
XII.—LABOURERS UNSPECIFIED	18	4
OTHERS	40	13
SAINI (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	897	93
Cultivators of all kinds	*872*	*9*
Field labourers, wood cutters, etc.	5	1
Raisers of livestock, etc.	17	8
Others	3	1
III.—INDUSTRIES	14	94
Artisans and other workmen	13	105
Others	1	..
V.—TRADE	18	10
VI.—PUBLIC FORCE	19	..
OTHERS	52	24
SAINI (SIKH)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	933	6
Cultivators of all kinds	*911*	*7*
Field labourers, wood cutters, etc.	12	1
Raisers of livestock, etc.	9	2
Others	1	8
VI.—PUBLIC FORCE	18	..
OTHERS	49	18
SANSI (HINDU)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	272	7
Income from rent of land	14	18
Cultivators of all kinds	70	3
Field labourers, wood cutters, etc.	86	13
Raisers of livestock, etc.	99	5
Others	3	..
III.—INDUSTRIES	32	101
IV.—TRANSPORT	20	7
V.—TRADE	80	63
XII.—LABOURERS UNSPECIFIED	37	15
XIII.—BEGGARS, PROSTITUTES, CRIMINALS AND INMATES OF JAILS AND ASYLUMS	580	40
OTHERS	29	3
SAYAD (MUSALMAN)—		
I.—EXPLOITATION OF ANIMALS AND VEGETATION ..	281	5
Income from rent of land	55	10
Cultivators of all kinds	197	

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
SAYAD (Musalman)—*concluded.*		
Field labourers, wood cutters, etc.	16	1
Raisers of livestock, etc.	12	1
Others	1	1
III.—Industries	40	48
IV.—Transport	33	..
Labourers, boatmen, etc.	30	..
Others	3	..
V.—Trade	23	3
VI.—Public force	32	..
VII.—Public administration	33	..
VIII.—Arts and professions	407	7
Religion	*384*	*8*
Others	23	9
X.—Domestic service	24	5
XII.—Labourers unspecified	23	16
XIII.—Beggars, prostitutes, etc.	94	12
Others	10	14
SHEIKH (Musalman)—		
I.—Exploitation of animals and vegetation	215	4
Income from rent of land	21	15
Cultivators of all kinds	138	3
Field labourers, wood cutters, etc.	30	2
Raisers of livestock, etc.	20	1
Others	6	1
III.—Industries	132	21
Artisans and other workmen	130	21
Others	2	2
IV.—Transport	61	1
Labourers, boatmen, etc.	54	1
Others	7	..
V.—TRADE	293	3
VI.—Public force	49	..
VII.—Public administration	36	..
VIII.—Arts and professions	38	8
Religion	11	2
Lawyers, doctors, etc.	16	5
Others	11	21
X.—Domestic service	61	7
XII.—Labourers unspecified	45	13
XIII.—Beggars, prostitutes, etc.	45	17
Others	20	8
SUNAR (Hindu)—		
I.—Exploitation of animals and vegetation	84	22
Income from rent of land	7	22
Cultivators of all kinds	66	25
Field labourers, wood cutters, etc.	6	7
Raisers of livestock, etc.	4	5
Others	1	14
III.—INDUSTRIES	851	5
V.—Trade	18	9
Others	47	25
SUNAR (Musalman)—		
I.—Exploitation of animals and vegetation	55	7
Cultivators of all kinds	48	8
Others	7	2
III.—INDUSTRIES	877	2
Others	68	25
TARKHAN (Hindu)—		
I.—Exploitation of animals and vegetation	350	27
Income from rent of land	14	79
Cultivators of all kinds	302	27
Field labourers, wood cutters, etc.	17	21
Raisers of livestock, etc. }	17	14
Others }		
III.—INDUSTRIES	611	4
XII.—Labourers unspecified	11	38
Others	23	13
TARKHAN (Sikh)—		
I.—Exploitation of animals and vegetation	317	4
Income from rent of land	29	33
Cultivators of all kinds	264	2
Field labourers, wood cutters, etc.	13	1

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
TARKHAN (Sikh)—*concluded.*		
Raisers of livestock, etc.	8	3
Others	3	..
III.—INDUSTRIES	610	8
IV.—Transport	16	1
XII.—Labourers unspecified	17	25
Others	40	16
TARKHAN (Musalman)—		
I.—Exploitation of animals and vegetation	204	3
Income from rent of land	17	14
Cultivators of all kinds	149	2
Field labourers, wood cutters, etc.	29	1
Raisers of livestock, etc.	8	3
Others	1	13
III.—INDUSTRIES	725	3
XII.—Labourers unspecified	25	35
Others	46	13
TELI (Musalman)—		
I.—Exploitation of animals and vegetation	301	3
Income from rent of land	11	10
Cultivators of all kinds	201	4
Field labourers, wood cutters, etc.	49	1
Raisers of livestock, etc.	38	1
Others	2	1
III.—INDUSTRIES	563	9
IV.—Transport	24	..
V.—Trade	30	3
XII.—Labourers unspecified	39	27
Others	43	16
EUROPEANS—		
IV.—Transport	52	3
Owners, managers, ship's officers, etc.	48	3
Labourers, boatmen, etc.	4	..
VI.—Public force	805	..
Commissioned and Gazetted Officers	81	..
Others	724	..
VII.—Public administration	46	5
Gazetted Officers	25	1
Others	21	11
VIII.—Arts and professions	53	146
Religion	12	74
Lawyers, doctors, etc.	28	132
Others	13	376
Others	44	29
ANGLO-INDIANS—		
III.—Industries	28	30
Artisans and other workmen	20	45
Others	8	..
IV.—Transport	449	3
Owners, managers, ship's officers, etc.	407	4
Labourers, boatmen, etc.	42	..
V.—Trade	21	14
VI.—Public force	156	..
Commissioned and Gazetted Officers	72	..
Others	84	..
VII.—Public administration	118	9
Gazetted Officers	39	..
Others	79	14
VIII.—Arts and professions	143	83
Religion	8	71
Lawyers, doctors, etc.	95	57
Others	40	333
IX.—Persons living on their income	30	34
X.—Domestic service	27	10
XI.—Contractors, clerks, etc.	13	100
Others	15	64
ARMENIANS—		
IV.—Transport	125	..
V.—Trade	125	..
VI.—Public force	125	..
VII.—Public administration	250	..
VIII.—Arts and professions	250	..
IX.—Persons living on their income	125	..

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
DELHI.		
AGGARWAL (Hindu)—		
I.—Exploitation of animals and vegetation	12	5
Income from rent of land	2	18
Cultivators of all kinds	9	4
Others	1	..
III.—Industries	65	21
Artisans and other workmen	62	22
Others	3	..
IV.—Transport	47	1
Labourers, boatmen, etc.	30	2
Others	17	..
V.—TRADE	772	4
VII.—Public administration	17	..
VIII.—Arts and professions	19	5
IX.—Persons living on their income	17	64
X.—Domestic service	24	9
XI.—Contractors, clerks, etc.	19	1
Others	8	52
AGGARWAL (Jain)—		
III.—Industries	52	45
IV.—Transport	48	..
V.—TRADE	728	3
VII.—Public administration	47	..
IX.—Persons living on their income	52	69
Others	73	14
AHIR (Hindu)—		
I.—Exploitation of animals and vegetation	712	5
Cultivators of all kinds	*682*	*5*
Raisers of livestock, etc.	18	21
Others	12	..
III.—Industries	51	8
IV.—Transport	83	1
V.—Trade	59	6
VI.—Public force	28	..
X.—Domestic service	30	3
XII.—Labourers unspecified	16	13
Others	21	3
ARAIN (Musalman)—		
I.—Exploitation of animals and vegetation	620	3
Cultivators of all kinds	*601*	*3*
Others	19	..
III.—Industries	148	10
IV.—Transport	47	..
V.—Trade	97	2
VI.—Public force	40	..
IX.—Persons living on their income	39	..
Others	9	20
BRAHMAN (Hindu)—		
I.—Exploitation of animals and vegetation	230	8
Cultivators of all kinds	211	8
Field labourers, wood cutters, etc.	7	1
Raisers of livestock, etc.	5	1
Others	7	35
III.—Industries	70	16
IV.—Transport	96	..
V.—Trade	192	2
VI.—Public force	35	..
VII.—Public administration	56	..
VIII.—Arts and professions	160	35
Religion	*120*	*47*
Others	40	7
BRAHMAN (Hindu)—*concluded.*		
X.—Domestic service	82	11
XII.—Labourers unspecified	13	21
XIII.—Beggars, prostitutes, etc.	10	18
Others	56	7
CHAMAR (Hindu)—		
I.—Exploitation of animals and vegetation	195	21
Cultivators of all kinds	53	14
Field labourers, wood cutters, etc.	138	24
Others	4	8
III.—INDUSTRIES	456	32
IV.—Transport	86	1
V.—Trade	17	38
XII.—Labourers unspecified	226	45
Others	20	24
CHUHRA (Hindu)—		
I.—Exploitation of animals and vegetation	39	9
Cultivators of all kinds	10	..
Field labourers, wood cutters, etc.	22	17
Others	7	..
III.—INDUSTRIES	839	55
IV.—Transport	21	5
VI.—Public force	10	..
VII.—Public administration	47	4
X.—Domestic service	12	14
XII.—Labourers unspecified	12	12
Others	20	29
DHANAK (Hindu)—		
I.—Exploitation of animals and vegetation	70	21
Cultivators of all kinds	21	33
Field labourers, wood cutters, etc.	41	26
Others	8	..
III.—Industries	183	21
IV.—Transport	117	..
X.—DOMESTIC SERVICE	419	8
XII.—Labourers unspecified	165	22
Others	46	..
DHOBI (Hindu)—		
I.—Exploitation of animals and vegetation	32	19
Cultivators of all kinds	14	7
Field labourers, wood cutters, etc.	10	71
Others	8	..
III.—INDUSTRIES	845	32
IV.—Transport	70	..
X.—Domestic service	14	13
XII.—Labourers unspecified	22	24
Others	17	11
DHOBI (Musalman)—		
III.—INDUSTRIES	978	25
IV.—Transport	2	..
DAGI AND KOLI (Hindu)—		
I.—Exploitation of animals and vegetation	56	46
Cultivators of all kinds	*46*	*51*
Field labourers, wood cutters, etc.	6	6
Others	*4*	..
III.—Industries	245	52
IV.—Transport	249	7
V.—Trade	34	22
X.—Domestic service	133	5
XII.—Labourers unspecified	215	27
Others	68	3

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued*.

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
FAQIR (Musalman)—		
I.—Exploitation of animals and vegetation	312	3
Cultivators of all kinds	196	2
Field labourers, wood cutters, etc.	113	5
Others	3	..
III.—Industries	53	36
IV.—Transport	35	..
XII.—Labourers unspecified	35	..
XIII.—Beggars, prostitutes, criminals and inmates of jails and asylums	557	15
Others	8	17
GUJJAR (Hindu)—		
I.—Exploitation of animals and vegetation	809	5
Cultivators of all kinds	*778*	*6*
Field labourers, wood cutters, etc.	9	..
Raisers of livestock, etc.	17	..
Others	5	..
III.—Industries	22	35
IV.—Transport	82	7
V.—Trade	17	..
XII.—Labourers unspecified	21	6
Others	49	..
JAT (Hindu)—		
I.—Exploitation of animals and vegetation	893	4
Cultivators of all kinds	*887*	*4*
Others	6	3
III.—Industries	18	6
IV.—Transport	14	1
V.—Trade	14	7
VI.—Public force	41	..
Others	20	15
JHIWAR (Hindu)—		
I.—Exploitation of animals and vegetation	73	4
Income from rent of land	2	..
Cultivators of all kinds	62	1
Others	9	2
III.—Industries	119	27
IV.—Transport	220	1
V.—Trade	146	4
X.—Domestic service	352	32
XII.—Labourers unspecified	28	4
Others	62	5
JULAHA (Hindu)—		
I. Exploitation of animals and vegetation	32	17
Cultivators of all kinds	16	37
Others	16	2
III.—Industries	520	33
IV.—Transport	148	6
V.—Trade	28	11
VIII.—Arts and professions	32	25
X.—Domestic service	23	9
XII.—Labourers unspecified	199	18
Others	18	64
KHATRI (Hindu)—		
I.—Exploitation of animals and vegetation	22	2
Cultivators of all kinds	19	5
Field labourers, wood cutters, etc.	2	..
Others	1	..
III.—Industries	87	14
IV.—Transport	93	1
V.—Trade	582	4
KHATRI (Hindu)—*concluded*.		
VII.—Public administration	50	..
VIII.—Arts and professions	56	3
IX.—Persons living on their income	47	25
X.—Domestic service	47	18
Others	16	53
KUMHAR (Hindu)—		
I.—Exploitation of animals and vegetation	34	17
Cultivators of all kinds	10	3
Field labourers, wood cutters, etc.	19	31
Others	5	..
III.—Industries	705	13
IV.—Transport	180	3
V.—Trade	33	7
X.—Domestic service	16	12
XII.—Labourers unspecified	23	16
Others	9	25
LOHAR (Hindu)—		
I.—Exploitation of animals and vegetation	203	12
Income from rent of land	3	..
Cultivators of all kinds	124	11
Field labourers, wood cutters, etc.	73	15
Others	3	..
III.—Industries	665	4
IV.—Transport	46	..
X.—Domestic service	30	12
Others	56	9
MACHHI (Musalman)—		
III.—Industries	50	..
IV.—Transport	126	..
X.—Domestic service	773	5
Others	51	4
MALI (Hindu)—		
I.—Exploitation of animals and vegetation	398	13
Cultivators of all kinds	*337*	*11*
Field labourers, wood cutters, etc.	41	51
Others	20	..
III.—Industries	162	7
IV.—Transport	84	11
V.—Trade	139	22
X.—Domestic service	57	14
XII.—Labourers unspecified	111	12
Others	49	10
MEO (Musalman)—		
I.—Exploitation of animals and vegetation	457	1
Cultivators of all kinds	*457*	*1*
III.—Industries	205	9
IV.—Transport	143	3
V.—Trade	35	19
VI.—Public force	33	..
X.—Domestic service	28	11
XII.—Labourers unspecified	65	..
Others	34	9
MOGHAL (Musalman)—		
I.—Exploitation of animals and vegetation	73	..
Cultivators of all kinds	*63*	..
Others	10	..
III.—Industries	385	5
IV.—Transport	70	1
V.—Trade	153	..
VI.—Public force	39	..
VII.—Public administration	42	..
IX.—Persons living on their income	124	29
X.—Domestic service	47	32
Others	67	18

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*continued.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
NAI (Hindu)—		
I.—Exploitation of animals and vegetation	47	1
Cultivators of all kinds	39	1
Others	8	..
III.—INDUSTRIES	841	19
IV.—Transport	23	..
V.—Trade	20	14
X.—Domestic service	40	9
Others	29	31
PATHAN (Musalman)—		
I.—Exploitation of animals and vegetation	146	1
Cultivators of all kinds	*140*	*1*
III.—Industries	335	4
IV.—Transport	89	1
V.—Trade	156	..
VI.—Public force	52	..
VII.—Public administration	48	..
IX.—Persons living on their income ..	22	14
X.—Domestic service	75	18
XIII.—Beggars, prostitutes, etc.	28	21
Others	56	5
QURESHI (Musalman)—		
III.—Industries	494	7
IV.—Transport	74	..
V.—Trade	256	9
VII.—Public administration	26	..
IX.—Persons living on their income ..	24	67
X.—Domestic service	42	44
Others	84	15
RAJPUT (Hindu)—		
I.—Exploitation of animals and vegetation	275	5
Cultivators of all kinds	*261*	*4*
Others	14	9
III.—Industries	289	5
IV.—Transport	84	1
V.—Trade	124	5
VI.—Public force	27	..
VII.—Public administration	58	..
X.—Domestic service	64	5
XII.—Labourers unspecified	38	28
Others	41	26
RAJPUT (Musalman)—		
I.—Exploitation of animals and vegetation	415	3
Cultivators of all kinds	*415*	*3*
III.—Industries	99	30
IV.—Transport	169	..
V.—Trade	46	..
VI.—Public force	148	..
VII.—Public administration	41	..
X.—Domestic service	32	2
Others	50	19
SAINI (Hindu)—		
I.—Exploitation of animals and vegetation	906	17
Cultivators of all kinds	*766*	*7*
Field labourers, wood cutters, etc. ..	110	351
Others	30	..
IV.—Transport	16	..
XII.—Labourers unspecified	30	..
Others	48	9
SANSI (Hindu)—		
I.—Exploitation of animals and vegetation	48	..
Cultivators of all kinds	48	..
III.—Industries	419	33
IV.—Transport	161	5
SANSI (Hindu)—*concluded.*		
VI.—Public force	48	..
VII.—Public administration	32	..
X.—Domestic service	24	..
XII.—Labourers unspecified	210	..
XIII.—BEGGARS, PROSTITUTES, CRIMINALS AND INMATES OF JAILS AND ASYLUMS	48	..
Others	10	..
SAYAD (Musalman)—		
I.—Exploitation of animals and vegetation	57	6
Income from rent of land	3	30
Cultivators of all kinds	53	5
Others	1	..
III.—Industries	347	5
IV.—Transport	86	1
Labourers and other workmen	73	1
Others	13	4
V.—Trade	212	..
VI.—Public force	50	..
VII.—Public administration	24	..
VIII.—Arts and professions	101	2
Religion	*66*	..
Lawyers, doctors, etc.	23	5
Others	12	4
IX.—Persons living on their income ..	32	29
X.—Domestic service	53	16
Others	38	3
SHEIKH (Musalman)—		
I.—Exploitation of animals and vegetation	24	4
Cultivators of all kinds	23	4
Others	1	..
III.—Industries	439	5
IV.—Transport	60	..
Labourers, boatmen, etc.	57	..
Others	3	..
V.—TRADE	315	1
VII.—Public administration	16	..
VIII.—Arts and professions	22	4
X.—Domestic service	60	21
XII.—Labourers unspecified	15	8
XIII.—Beggars, prostitutes, etc.	16	45
Others	33	13
SUNAR (Hindu)—		
III.—INDUSTRIES	923	3
IV.—Transport	18	..
V.—Trade	20	..
Others	39	67
TARKHAN (Hindu)—		
I.—Exploitation of animals and vegetation	53	35
Cultivators of all kinds	40	45
Field labourers, wood cutters, etc. ..	10	9
Others	3	..
III.—INDUSTRIES	786	2
IV.—Transport	60	..
V.—Trade	13	..
X.—Domestic service	25	..
XII.—Labourers unspecified	89	77
Others	24	4
TELI (Musalman)—		
I.—Exploitation of animals and vegetation	129	..
Cultivators of all kinds	127	..
Others	2	..
III.—INDUSTRIES	746	10
IV.—Transport	49	..

(OCCUPATIONAL)—SUBSIDIARY TABLE VIII.

Occupations of selected castes—*concluded.*

Caste and occupation.	Number per 1,000 workers engaged in each occupation.	Number of female workers per 100 males.
1	2	3
TELI (Musalman)—*concluded.*		
V.—Trade	23	..
XII.—Labourers unspecified	30	..
Others	23	38
EUROPEANS—		
IV.—Transport	45	6
Owners, managers, ship's officers, etc.	28	11
Labourers, boatmen, etc.	17	..
VI.—Public force	738	..
Commissioned and Gazetted Officers	87	..
Others	651	..
VII.—Public administration	74	14
Gazetted officers	20	..
Others	54	20
VIII.—Arts and professions	50	162
Religion	2	400
Lawyers, doctors, etc.	25	144
Others	23	175
Others	93	25
ANGLO-INDIANS—		
III.—Industries	11	..
IV.—Transport	217	17
Owners, managers, ship's officers, etc.	211	19
Labourers, boatmen, etc.	6	..
VII.—Public administration	377	19
Gazetted officers	33	..
Others	344	22
VII.—Arts and professions	250	350
X.—Domestic service	89	7
Others	56	67
ARMENIANS—		
IV.—Transport	400	..
Owners, managers, ship's officers, etc.	333	..
Labourers, boatmen, etc.	67	..
V.—Trade	67	..
VI.—Public force	167	..
VII.—Public administration	166	..
VIII.—Arts and professions	133	..
IX.—Persons living on their income	67	..

(OCCUPATIONAL)—SUBSIDIARY TABLE IX.

Number of persons employed on the 18th March 1921 on Railways and in the Irrigation Department in the Punjab and Delhi.

Class of persons employed.		Europeans and Anglo-Indians.	Indians.	Remarks.
1		2	3	4
RAILWAYS.				
Total persons employed	Punjab ..	2,077	83,787	
	Delhi ..	25	3,033	
Persons directly employed —				
Officers	Punjab ..	102	33	
	Delhi ..	7	..	
Subordinates drawing more than Rs. 75 p. m. ..	Punjab ..	1,049	2,476	One Indian on leave.
	Delhi ..	18	49	
" " from Rs. 20 to Rs. 75 p. m. ..	Punjab ..	411	31,666	21 Indians on leave.
	Delhi ..	..	722	
" " under Rs. 20 p. m.	Punjab ..	512	38,550	
	Delhi ..	..	2,041	
Persons indirectly employed—				
Contractors	Punjab ..	2	386	
	Delhi ..	..	19	
Contractors' regular employees	Punjab ..	1	1,844	
	Delhi ..	..	13	
Coolies	Punjab ..	..	8,832	
	Delhi ..	..	189	
IRRIGATION DEPARTMENT.				
Total persons employed		114	46,079	
Persons directly employed—				
Officers		86	133	
Upper subordinates		1	256	
Lower subordinates		1	2,698	
Clerks		26	1,409	
Peons and other servants		..	9,067	
Coolies		..	3,305	
Persons indirectly employed—				
Contractors		..	1,582	
Contractors' regular employees		..	2,168	
Coolies		..	25,461	

(OCCUPATIONAL)—SUBSIDIARY TABLE IX-A.

Number of persons employed in the Post Office and Telegraph Department on the 18th March 1921 in the Punjab and Delhi.

Class of persons employed.	Post Office.		Telegraph Department.		Remarks.
	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	
1	2	3	4	5	6
(1) POSTS AND TELEGRAPHS.					
Total persons employed	35	11,140	386	962	
Supervising officers (including probationary superintendents and inspectors of post offices and assistant and deputy superintendents of telegraphs and all officers of higher rank than these)	10	58	8	..	
Postmasters including deputy, assistant, sub and branch postmasters ..	11	897	..	..	
Signalling establishment including warrant officers, non-commissioned officers, military telegraphists and other employees	..	..	326	309	
Miscellaneous agents, schoolmasters, station masters, etc.	..	2,030	..	..	
Clerks of all kinds	14	1,957	2	144	
Postmen	..	3,418	..	..	
Unskilled labour establishment including line coolies, cable guards, batterymen, telegraph messengers, peons and other employees	..	657	..	509	
Road establishment consisting of overseers, runners, clerks and booking agents, boatmen, syces, coachmen, bearers and others	..	2,114	..	..	
(2) RAILWAY MAIL SERVICE.					
Total persons employed	..	970	..	..	
Supervising officers (including superintendents and inspectors of sorting) ..	..	21	..	..	
Clerks of all kinds	..	15	..	..	
Sorters	..	543	..	..	
Mail guards, mail agents, van peons, porters, etc.	..	391	..	..	

I. Distribution of industries and persons employed. II. Particulars of establishments employing 20 or more persons in 1921 and 1911. III. Organisation of establishments. IV. Place of origin of skilled employees. V. Place of origin of unskilled labourers. VI. Distribution of certain races in certain industrial establishments. VII. Proportional distribution of adult women and of children of each sex in different industries. VIII. Distribution of power.

(INDUSTRIAL)—SUBSIDIARY TABLE I.

Distribution of industries and persons employed.

Industrial Establishments.	Total number of establishments.	GENERAL DISTRIBUTION OF INDUSTRIES AND PERSONS EMPLOYED.	NUMBER OF PERSONS EMPLOYED.												Number of adult females employed per 1,000 adult males.	Number of children of both sexes employed per 1,000 adults.
		Districts and States where chiefly located.	Total.		Direction, Supervision and Clerical.				Skilled workmen.		Unskilled Labourers.					
					Europeans and Anglo-Indians.		Indians.				Adults.		Children.			
			Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PUNJAB ..	763		57,019	4,217	312	5	2,139	..	28,865	775	23,391	2,852	2,312	585	66	50
1. Growing of special products.	34	Kangra, Mandi State ..	1,726	303	7	1	82	..	320	9	1,041	224	276	69	161	205
Tea factories ..	34	Kangra, Mandi State	1,726	303	7	1	82	..	320	9	1,041	224	276	69	161	205
2. Mines ..	17	Jhelum, Shahpur, Attock	3,355	72	21	..	61	..	1,420	28	1,788	37	65	7	20	21
COAL MINES ..	8	Jhelum ..	1,879	7	1	..	27	..	764	..	1,052	7	35	..	4	19
SALT MINES ..	4	Jhelum ..	675	49	3	..	9	..	509	26	152	19	2	4	67	8
3. Quarries of hard rocks.	23	Jhelum, Mandi State, Kangra.	1,264	185	3	..	35	..	377	48	755	96	94	41	123	103
4. Textile and connected industries.	203	Lahore, Amritsar, Gurdaspur, Montgomery, Multan, Nabha State, Shahpur, Patiala State, Ludhiana.	11,804	1,731	34	..	583	..	5,160	83	5,433	1,548	594	100	145	54
COTTON GINNING AND PRESSING.	164	Lahore, Amritsar, Montgomery, Lyallpur, Multan, Nabha State.	7,266	1,595	3	..	413	..	2,167	34	4,454	1,464	229	97	213	38
WOOLLEN MILLS ..	3	Lahore, Amritsar, Gurdaspur.	1,888	74	28	..	70	..	928	..	806	71	56	3	39	31
CARPET FACTORIES	12	Amritsar, Gurdaspur ..	1,429	2	1	..	53		1,076	2	66	..	233	..	2	194
5. Leather industries	15	Lahore, Gujranwala ..	418	9	..	..	24	..	273	9	109	..	12	..	22	29
6. Wood industries ..	7	Lahore ..	538	..	2	..	13	..	278	..	221	..	24	..	..	47
7. Metal industries ..	35	Gurdaspur, Lahore, Amritsar, Sialkot, Rawalpindi.	3,233	2	79	1	161	..	1,178	1	1,562	..	253	..	1	85
IRON WORKS ..	14	Lahore, Amritsar, Sialkot.	1,099	2	13	1	61	..	574	1	362	..	89	..	2	88
8. Glass and earthenware industries.	4	Ambala, Lahore, Amritsar, Rawalpindi.	249	9	..	..	14	..	37	..	120	7	78	2	41	449
9. Industries connected with chemical products.	13	Amritsar, Lahore, Mianwali, Bahawalpur State.	222	15	..	..	24	..	87	1	104	11	7	3	56	44
10. Food industries ..	112	Ferozepore, Amritsar, Lahore, Shahpur, Patiala State, Bahawalpur State, Montgomery.	4,530	132	42	..	287	..	1,168	1	2,865	126	168	5	29	39
FLOUR MILLS ..	127	Shahpur, Amritsar, Patiala State, Lahore.	4,174	418	8	..	298	..	1,323	22	2,400	372	145	24	98	38
11. Industries of dress	9	Ludhiana ..	520	..	3	..	34	..	393	..	59	..	31	..	..	63
12. Furniture industries	8	Gujrat ..	305	..	1	..	19	..	206	..	66	..	13	..	..	45
13. Industries connected with buildings.	180	Lahore, Amritsar, Rohtak, Ambala, Hoshiarpur, Ludhiana, Gujrat, Rawalpindi, Shahpur, Patiala State.	6,238	1,753	..	..	287	..	2,917	593	2,445	802	589	358	247	134
BRICK KILNS ..	161	Lahore, Amritsar, Rohtak, Ambala, Hoshiarpur, Ludhiana, Gujrat, Rawalpindi, Shahpur, Patiala State.	5,953	1,700	..	..	258	..	2,841	593	2,278	754	576	353	251	138
14. Construction of means of transport	28	Ambala, Lahore, Rawalpindi, Bahawalpur, State. Patiala State.	17,228	2	75	1	284	..	11,272	1	5,582	..	15	..	..	1
RAILWAY WORKSHOPS	19	Ambala, Lahore, Rawalpindi, Bahawalpur State.	16,864	..	51	..	246	..	11,080	..	5,480	..	7	..	..	..

(INDUSTRIAL)—SUBSIDIARY TABLE I.

Distribution of industries and persons employed—*concluded.*

Industrial Establishments.	Total number of establishments.	Districts and States where chiefly located.	GENERAL DISTRIBUTION OF INDUSTRIES AND PERSONS EMPLOYED. — NUMBER OF PERSONS EMPLOYED. — *Total.*		DIRECTION, SUPERVISION AND CLERICAL. — *Europeans and Anglo-Indians.*		DIRECTION, SUPERVISION AND CLERICAL. — *Indians.*		*Skilled workmen.*		UNSKILLED LABOURERS. — *Adults.*		UNSKILLED LABOURERS. — *Children.*		Number of adult females employed per 1,000 adult males.	Number of children of both sexes employed per 1,000 adults.
			Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PUNJAB—*concluded.*																
15. Production, application and transmission of physical forces.	15	Rawalpindi, Lahore, Ludhiana.	1,376	1	25	..	82	..	651	1	618	..	..	..	1	..
ELECTRIC POWER HOUSE.	8	Lahore ..	1,215	1	25	..	66	..	591	1	533	..	..	..	1	..
16. Industries of Luxury.	60	Ambala, Simla, Lahore, Amritsar, Sialkot.	4,013	3	20	2	149	..	3,128	..	623	1	93	..	1	24
PRINTING PRESS ..	42	Ambala, Simla, Lahore, Amritsar.	3,206	2	20	2	97	..	2,468	..	552	..	69	..	1	22
DELHI ..	38	DELHI ..	4,752	538	46	..	201	..	2,787	133	1,518	324	200	81	100	56
1. Quarries of hard rocks.	1		703	14	1	..	..	..	513	..	184	14	5	..	20	7
2. WOOD INDUSTRIES	1		123	..	2	..	9	..	80	..	30	..	2	..	..	17
3. METAL INDUSTRIES	2		91	..	1	..	1	..	45	..	36	..	8	..	..	96
4. Glass and earthenware industries.	3		68	15	..	..	5	..	32	..	27	13	4	2	203	78
5. Industries connected with chemical products.	1		35	..	2	..	8	..	10	..	15	..	..	..	..	..
6. Food industries ..	3		128	..	3	..	2	..	71	..	52	..	..	..	..	..
7. Furniture industries.	1		29	..	..	..	3	..	21	..	4	..	1	..	..	36
8. Industries connected with buildings.	19		1,912	505	17	..	65	..	905	132	757	295	168	78	245	113
BRICK KILNS ..	17		1,538	500	1	..	17	..	789	132	575	290	156	78	305	130
9. Construction of means of transport.	4		581	1	14	..	31	..	342	1	188	..	6	..	2	10
10. Production, application and transmission of physical forces.	1		362	..	2	..	50	..	141	..	169	..	..	..	..	..
11. Industries of Luxury.	2		720	3	4	..	27	..	627	..	56	2	6	1	3	10

(INDUSTRIAL)—SUBSIDIARY TABLE II.

Particulars of establishments employing 20 or more persons in 1921 and 1911.

Serial No.	Establishments employing 20 or more persons.	Year	All industries.	Growing of special products.	Mines.	Quarries of hard rocks.	Textile and connected industries.	Leather industries.	Wood industries.	Metal industries.	Glass and earthenware industries.	Industries connected with chemical products.	Food industries.	Industries of dress.	Furniture industries.	Industries connected with buildings.	Construction of means of transport.	Production, application, transmission of physical forces.	Industries of luxury.
	1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	PUNJAB & DELHI.																		
	Total Establishments.	1921	538	23	17	20	154	10	5	19	7	3	50	5	6	141	27	11	40
		1911	443	41	10	5	104	3	1	37	2	4	61	10	4	97	24	6	34
(i)	Directed by Government or Local Authorities.	1921	93	2	5	13	4	..	2	5	..	..	20	1	..	9	20	7	5
		1911	58	..	3	3	..	..	..	12	..	..	8	..	1	5	18	2	6
(ii)	Directed by Registered Companies	1921	40	..	3	1	6	..	2	2	1	1	4	..	..	6	4	3	7
		1911	43	1	1	1	20	..	..	2	..	..	12	..	..	2	1	3	..
(iii)	Owned by Private Persons—																		
(A)	Europeans or Anglo-Indians.	1921	17	1	2	..	2	..	..	..	..	..	6	..	..	2	2	..	2
		1911	30	8	..	..	4	..	..	2	..	..	4	8	..	1	3	..	..
(B)	Indians ..	1921	387	20	7	6	142	10	1	12	6	2	20	4	5	124	1	1	26
		1911	312	32	6	1	80	3	1	21	2	4	37	2	3	89	2	1	28
(C)	Others ..	1921	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
		1911	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..
	A.—PUNJAB.																		
	Number of persons employed.	1921	57,153	1,851	3,427	1,403	12,759	852	495	2,945	258	77	3,642	457	267	7,094	17,168	1,296	3,662
		1911	45,532	3,914	2,757	2,250	8,312	102	..	3,350	72	160	3,054	238	296	6,397	10,994	100	3,536
(a)	Direction, Supervision and Clerical.	1921	1,970	67	82	34	525	19	12	198	14	5	201	30	15	196	353	95	124
		1911	2,791	279	107	48	749	6	..	356	9	25	307	10	10	193	199	6	487
(b)	Skilled workmen ..	1921	27,932	309	1,448	412	4,869	225	247	1,010	37	36	829	348	181	3,248	11,232	624	2,877
		1911	20,179	737	611	89	3,506	59	..	1,666	40	25	582	185	254	2,045	7,927	57	2,396
(c)	Unskilled labourers	1921	27,251	1,475	1,897	957	7,365	108	236	1,737	207	36	2,612	79	71	3,650	5,583	577	661
		1911	22,562	2,898	2,039	2,113	4,057	37	..	1,328	23	110	2,165	43	32	4,159	2,868	37	653
(i)	Adult women per 1,000 adult men.	1921	125	219	21	132	297	..	..	..	58	185	48	..	..	362	..	..	2
		1911	129	124	291	17	205	..	..	..	..	119	59	..	..	230	..	..	..
(ii)	Children of both sexes per 1,000 adult	1921	112	280	39	164	99	125	113	151	630	125	61	386	109	333	2	..	148
		1911	127	270	95	26	132	..	..	100	533	170	46	1,529	455	251	11	57	144
	B.—DELHI.																		
	Number of persons employed.	1921	5,271	..	..	717	..	..	123	91	83	35	128	..	29	2,398	582	362	723
		1911	3,792	..	..	..	1,988	..	46	350	..	..	660	31	..	147	165	312	93
(a)	Direction, Supervision and Clerical.	1921	246	..	..	1	..	..	11	2	15	10	5	..	3	81	45	52	31
		1911	293	..	..	..	98	..	1	40	..	..	95	1	..	2	6	41	9
(b)	Skilled workmen ..	1921	2,915	..	..	513	..	..	80	45	32	10	71	..	21	1,032	343	141	627
		1911	2,009	..	..	..	1,387	..	10	181	..	..	136	30	..	23	106	96	40
(c)	Unskilled labourers	1921	2,110	..	..	203	..	..	32	44	46	15	52	..	5	1,285	194	169	65
		1911	1,490	..	..	..	503	..	35	129	..	..	429	..	..	122	53	175	44
(i)	Adult women per 1,000 adult men.	1921	212	..	..	76	..	..	..	..	203	..	..	..	..	387	..	..	36
		1911	126	..	..	..	271	..	..	..	..	..	12	..	..	705	..	131	30
(ii)	Children of both sexes per 1,000 adult.	1921	151	..	..	..	..	..	67	222	..	..	..	..	250	232	32	..	121
		1911	199	..	..	..	306	..	..	173	78	..	39	..	..	627	..	12	294

(INDUSTRIAL)—SUBSIDIARY TABLE III.

Organization of Establishments.

Type of Organization.	Industrial Establishments.																	Remarks.
	Total establishments.	Growing of special products.	Mines.	Quarries of hard rocks.	Textile and connected industries.	Leather industries.	Wood industries.	Metal industries.	Glass and earthenware industries.	Industries connected with chemical products.	Food industries.	Industries of dress.	Furniture industries.	Industries connected with buildings.	Construction of means of transport.	Production, application and transmission of physical forces.	Industries of luxury.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PUNJAB.																		
1. Under the Local Government or Local Authority	102	2	5	16	5	..	1	4	..	1	24	1	..	10	21	7	5	
2. Registered Companies ..	38	..	3	1	10	..	2	2	1	..	4	..	..	4	2	3	6	
(a) With European or Anglo-Indian Directors.	9	..	2	1	3	..	..	..	..	..	2	..	..	..	..	..	1	
(b) With Indian Directors ..	20	..	1	..	6	..	1	2	1	..	2	..	..	3	..	..	4	
(c) With Directors of different races.	9	..	..	..	1	..	1	..	..	..	..	..	..	1	2	3	1	1 factory, column No. 6, directed by Europeans and Indians. 1 factory, column No. 8, directed by Europeans and Indians. 1 factory, column No. 15, directed by Anglo-Indians and Indians. 2 factories, column No. 16, directed by Europeans and Indians. 3 factories, column No. 17, directed by Europeans and Indians. 1 factory, column No. 18, directed by Indians and Europeans.
3. Privately Owned ..	623	32	9	6	188	15	4	29	3	12	84	8	8	166	5	5	49	
(a) By Europeans and Anglo-Indians.	18	1	2	..	2	..	..	..	..	..	6	..	..	1	4	..	2	
(b) By Indians ..	603	31	7	6	*184	15	4	29	3	12	78	8	8	165	1	5	47	* One factory has two owners, one Khatri and one Sheikh.
(c) By joint owners of different races.	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2 factories, column No. 6, directed by Japanese and Chinese.
DELHI.																		
1. Under the Local Government or Local Authority.	9	..	..	1	..	..	1	1	..	..	2	..	..	..	2	1	1	
2. Registered Companies ..	6	..	..	..	..	..	..	..	..	1	..	..	..	2	2	..	1	
(a) With European or Anglo-Indian Directors.	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	
(b) With Indian Directors ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
(c) With Directors of different races.	4	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	1	1 factory, column No. 11, directed by Europeans and Indians. 2 factories, column No. 16, directed by Europeans and Indians. 1 factory, column No. 18, directed by Anglo-Indians and Indians.
3. Privately Owned ..	23	..	..	..	..	..	..	1	3	..	1	..	1	17	..	..	..	
(a) By Europeans and Anglo-Indians.	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	
(b) By Indians ..	20	..	..	..	..	..	..	1	3	..	..	..	..	16	..	..	..	
(c) By joint owners of different races.	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1 factory, column No. 14, directed by Chinese.

(INDUSTRIAL)—SUBSIDIARY TABLE IV.

Place of origin of skilled employees.

Birth Place.	Industrial Establishments. Total number of workmen.		Growing of special products.		Mines.		Quarries of hard rocks.		Textile and connected industries.		Leather industries.		Wood industries.		Metal industries.		Glass and earthenware industries.		Industries connected with chemical products.		Food industries.		Industries of dress.		Furniture industries.		Industries connected with buildings.		Construction of means of transport.		Production, application and transmission of physical forces.		Industries of luxury.		Remarks.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1. Punjab	24,664	542	319	9	1,371	26	377	48	4,767	44	213	9	162	..	758	1	26	..	29	1	838	1	348	..	..	..	2,569	401	9,527	1	496	1	2,864	..	
(1) District of employment ..	17,491	229	268	9	1,266	24	375	48	4,122	22	120	9	80	..	589	1	17	..	4	1	381	1	157	..	..	..	1,610	113	6,591	1	289	..	1,622	..	
(2) Other districts ..	7,173	313	51	..	105	2	2	..	645	22	93	..	82	..	169	..	9	..	25	..	457	..	191	..	..	..	959	288	2,936	..	207	1	1,242	..	
2. Outside the Province ..	2,933	231	1	..	1	..	..	..	368	39	60	..	..	..	56	..	4	..	11	..	61	..	32	..	..	..	326	192	1,680	..	95	..	238	..	
(1) Delhi	18	..	..	..	..	..	..	..	11	..	..	..	..	..	5	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	
(2) United Provinces of Agra and Oudh.	2,468	227	..	..	..	..	..	..	232	38	60		..	..	46	..	3	..	10	..	56	..	28	..	..	..	287	189	1,341	..	80	..	225	..	
(3) Bengal	76	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	73	..	..	..	..	..	
(4) Bombay	100	1	..	..	1	..	..	..	18	1	..	..	..	..	..	..	1	..	..	..	5	..	2	..	..	..	..	..	70	..	1	..	2	..	
(5) Madras	12	..	..	..	..		..	..	1	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	11	..	..	..	..	..	
(6) North-West Frontier Province.	253	3	..	..	..	..	..	..	4	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	38	3	183	..	14	..	10	..	
(7) Nepal	6	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	
3. Outside India	72	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	..	..	65	..	..	..	2	..	
England	72	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	..	..	65	..	..	..	2	..	
1. Delhi	343	3	..	..	..	..	17	..	..	..	..	..	..	..	..	..	2	..	..	..	9	..	..	..	..	..	99	2	39	1	19	..	158	..	
(1) District of employment ..	343	3	..	..	..	..	17	..	..	..	..	..	..	..	..	..	2	..	..	..	9	..	..	..	..	..	99	2	39	1	19	..	158	..	
(2) Other districts ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
2. Outside the Province ..	2,275	130	..	..	..	..	496	..	..	..	..	..	..	..	..	..	30	..	..	..	50	..	..	..	..	..	806	130	303	..	122	..	468	..	
(1) Punjab	496	2	..	..	..	..	12	..	..	..	..	..	..	..	..	..	12	..	..	..	8	..	..	..	..	..	200	2	91	..	35	..	138	..	
(2) United Provinces of Agra and Oudh.	1,587	128	..	..	..	..	413	..	..	..	..	..	..	..	..	..	18	..	..	..	42	..	..	..	..	..	574	128	207	..	87	..	246	..	
(3) Bengal	107	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	..	3		..	..	79	..	
(4) Bombay	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1		..	..	1	..	
(5) Madras	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	
(6) Gwaliar	55	..	..	..	..	..	53	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1		..	..	..	..	
(7) Jaipur	23	..	..	..	..	..	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	..	..	..	
(8) Nepal	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	
3. Outside India	1	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	
England	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	

(INDUSTRIAL)—SUBSIDIARY TABLE V.

Place of origin of unskilled labourers.

Birth place.	Total number of workmen. Males.	Total number of workmen. Females.	Growing of special products. Males.	Growing of special products. Females.	Mines. Males.	Mines. Females.	Quarries of hard rocks. Males.	Quarries of hard rocks. Females.	Textile and connected industries. Males.	Textile and connected industries. Females.	Leather industries. Males.	Leather industries. Females.	Wood industries. Males.	Wood industries. Females.	Metal industries. Males.	Metal industries. Females.	Glass and earthenware industries. Males.	Glass and earthenware industries. Females.	Industries connected with chemical products. Males.	Industries connected with chemical products. Females.	Food industries. Males.	Food industries. Females.	Industries of dress. Males.	Industries of dress. Females.	Furniture industries. Males.	Furniture industries. Females.	Industries connected with buildings. Males.	Industries connected with buildings. Females.	Construction of means of transport. Males.	Construction of means of transport. Females.	Production, application and transmission of physical forces. Males.	Production, application and transmission of physical forces. Females.	Industries of luxury. Males.	Industries of luxury. Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
PUNJAB—																																		
1. In the Province or State	21,042	2,780	1,317	293	1,773	44	849	137	5,171	1,360	110	..	232	..	1,530	..	135	9	45	13	2249	68	..	..	..	..	2.470	856	4,236	..	407	..	518	..
(1) Districts of employment	11,130	1,426	1,316	293	1,254	44	785	131	2,367	591	76	..	119	..	1,214	..	120	9	20	2	1,091	55	..	..	..	..	827	301	1,425	..	163	..	353	..
(2) Other districts	9,912	1,354	1	..	519	..	64	6	2,804	769	34	..	113	..	316	..	15	..	25	11	1,158	13	..	..	..	..	1,643	555	2,811	..	244	..	165	..
2. Outside the Province	3,685	632	..	..	80	..	..	..	673	275	11	..	1	..	233	..	47	..	2	1	490	53	..	..	..	..	558	303	1,361	..	126	..	103	..
Delhi	81	4	..	..	..	..	..	..	6	2	8	..	..	..	..	..	..	..	..	..	17	..	..	..	..	..	7	2	43	..	..	..	..	..
Baluchistan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
United Provinces of Agra and Oudh.	2,976	579	..	..	26	..	..	..	632	242	3	..	1	..	80	..	43	..	2	1	301	11	..	..	..	..	532	292	1,125	..	125	..	103	..
Bengal	2		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
Bombay	63	..	..	..	54	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	5	..	..	..	..	..
Madras	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
N.-W. F. Province	544	42	..	..	..	..	..	..	13	24	..	..	..	..	153	..	4	..	..	..	168	9	..	..	..	..	19	9	186	..	1	..	..	..
Nepal	19	7	..	..	..	..	..	..	19	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Outside India	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
England	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
DELHI—																																		
1. In the Province	251	22	..	..	..	..	26	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..	..	64	22	22	..	125	..	..	..
(1) District of employment	251	22	..	..	..	..	26	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..	..	64	22	22	..	125	..	..	..
(2) Other districts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Outside the Province	1,192	365	..	..	..	..	163	14	..	..	..	..	..	..	..	..	..	..	..	..	24	..	..	..	..	..	861	351	100	..	44	..	..	..
Punjab	462	68	..	..	..	..	119	14	..	..	..	..	..	..	..	..	..	..	..	..	11	..	..	..	..	..	259	54	66	..	7	..	..	..
United Provinces of Agra and Oudh.	725	296	..	..	..	..	44	..	..	..	..	..	..	..	..	..	..	..	..	..	13	..	..	..	..	..	598	296	33	..	37	..	..	..
Bombay	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	1	..	..	..	..	..
N.-W. F. Province	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
3. Outside India	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

(INDUSTRIAL)—SUBSIDIARY TABLE VI.

Distribution of certain Races in certain Industrial Establishments.

(INDUSTRIAL))—SUBSIDIARY TABLE VI.
Distribution of certain Races in certain Industrial Establishments.

Race or Caste.	Industrial Establishments.																																		Remarks.
	Total.		*Growing of special products.*		*Mines.*		*Quarries of hard rock.*		*Textile and connected industries.*		*Leather industries.*		*Wood industries.*		*Metal industries.*		*Glass and earthenware industries.*		*Industries connected with chemical products*		*Food industries.*		*Industries of dress.*		*Furniture industries.*		*Industries connected with buildings.*		*Construction of means of transport.*		*Production, application and transmission of physical forces.*		*Industries of luxury.*		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PUNJAB.																																			
Total Europeans and Anglo-Indians.	604	10	7	1	24	2	3	..	40	1	..	..	2	..	82	2	..	..	..	..	59	..	3	..	2	..	..	..	322	2	29	..	31	2	
Number employed as —																																			
(a) Managers	76	..	5	..	8	..	2	..	5	..	..	..	1	..	3	..	..	..	..	..	18	..	1	..	..	..	..	..	22	..	5	..	6	..	
(b) Supervising Staff ..	151	1	1	..	13	..	1	..	17	..	..	..	1	..	18	..	..	..	..	..	21	..	2	..	1	..	..	..	46	1	20	..	10	..	
(c) Clerical Staff	85	4	1	1	..	..	..	..	12	..	..	..	..	..	58	1	..	..	..	..	3	..	..	..	..	..	..	..	7	..	..	..	4	2	
(d) Skilled workmen ..	292	5	..	..	3	2	..	..	6	1	..	..	..	..	3	1	..	..	..	..	17	..	..	..	1	..	..	..	247	1	4	..	11	..	
DELHI.																																			
Total Europeans and Anglo-Indians.	71	..	..	..	..	..	1	..	..	..	..	..	2	..	1	..	..	..	3	..	3	..	..	..	..	..	19	..	24	..	2	..	16	..	
Number employed as —																																			
(a) Managers	16	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	1	..	3	..	..	..	..	..	3	..	3	..	1	..	2	..	
(b) Supervising Staff ..	27	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	12	..	10	..	1	..	2	..	
(c) Clerical Staff	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	
(d) Skilled workmen ..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	10	..	..	..	12	..	

(INDUSTRIAL)—SUBSIDIARY TABLE VII.

Proportional distribution of adult women and of children of each sex in different Industries.

Women and Children.	Principal Industries of Employment.															
	Total number employed.	Tea factories.	Stone quarries.	Cotton ginning and pressing.	Woollen mills.	Iron works.	Glass works.	Pottery works.	Saltpetre refineries.	Flour mills.	Dairy farms.	Tailoring establishments.	Hosiery works.	Brick kiln.	Printing press.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PUNJAB.																
Adult women	1,000	64	29	412	20	1	2	..	3	108	6	..	..	371	1	
Children	1,000	119	31	112	20	31	28	..	3	58	15	5	6	321	24	
Male	798	95	21	79	19	31	27	..	2	50	14	5	6	199	24	
Female	202	24	10	33	1	..	1	..	1	8	1	..	..	122	..	
DELHI.																
Adult women	1,000	..	31	..	..	..	..	28	..	..	..	..	..	923	..	
Children	1,000	..	18	..	..	..	..	21	..	..	..	..	..	833	..	
Male	..	..	18	..	..	..	..	14	..	..	..	..	..	555	..	
Female	..	..	..	..	..	..	..	7	..	..	..	..	..	278	..	

(INDUSTRIAL)—SUBSIDIARY TABLE VIII.

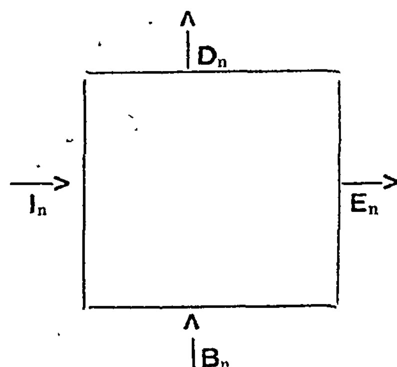
Distribution of Power.

Type of Power used.	Industrial Establishments.																	Remarks.
	Total establishments.	Growing of special products.	Mines.	Quarries.	Textile and connected industries.	Leather industries.	Wood industries.	Metal industries.	Glass and earthenware industries.	Industries connected with chemical products.	Food industries.	Industries of dress.	Furniture industries.	Industries connected with buildings.	Construction of means of transport.	Production, application and transmission of physical forces.	Industries of luxury.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PUNJAB.																		
Steam ..	289*	15	8	..	157 (a)	4	2 (b)	5	1	..	62 (c)	..	1	13	6 (d)	8 (e)	7	* Includes 12 factories using steam and electricity oil, as follows :—
Oil ..	66	..	1	..	12	2	1	9	1	..	26	..	..	6	1	1	6	(a) Col. No. 6 six establishments.
Water ..	16	..	..	..	..	..	..	..	..	..	16	..	..	..	..	..	..	(b) Col. No. 8 one establishment.
Gas ..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	(c) Col. No. 12 two establishments.
Electricity ..	53	..	..	..	6	..	3	4	..	..	4	1	1	2	9	7	16	(d) Col. No. 16 two establishments.
(a) Generated to the premises.	13	..	..	..	3	..	1	..	..	..	2	..	..	..	1	6	..	(e) Col. No. 17 one establishment.
(b) Supplied from without	40	..	..	..	3	..	2	4	..	..	2	1	1	2	8	1	16	
DELHI.																		
Steam ..	9	..	..	..	..	..	..	..	2	1	2	..	..	2	1	..	1	
Oil ..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	
Water ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Gas ..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	
Electricity ..	6	..	..	..	..	..	1	..	..	..	1	..	..	..	2	1	1	
(a) Generated to the premises.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	
(b) Supplied from without	5	..	..	..	..	..	1	..	..	..	1	..	..	..	2	..	1	

APPENDIX 1.

THE ERROR IN VITAL STATISTICS AS DETERMINED FROM CENSUS ENUMERATIONS, ON A PROBABLE HYPOTHESIS AS TO THE ERRORS OF THE CENSUS.

———o———



Let us call the number of persons recorded as immigrants at any census as I'_n, where n is the year of the Census. We will call the recorded number of emigrants E'_n.

Let I_n be the number of immigrants in the nth year.
E_n ,, ,, emigrants ,, ,,
B_n ,, ,, births ,, ,,
D_n ,, ,, deaths ,, ,,

Then if the inter-censal rise in population is R,

$$R = \text{Sum } (I_n + B_n - E_n - D_n)$$

$$B - D = R - n(I - E). \qquad \text{(I)}$$

provided that I_n and E_n are constant throughout the decade and equal to I and E respectively.

Now assum migrants enter at the mid-point of the year, we have

$$I'_{n+10} = I'_n s^{10} + I_{n+1} s^{9\frac{1}{2}} + I_{n+2} s^{8\frac{1}{2}} + \ldots\ldots + I_{n+10} s^{\frac{1}{2}}$$

where s is equal to the proportion of survivors after one year, and assuming a constant death-rate.

Hence

$$I'_{n+10} = I'_n s^{10} + s^{\frac{1}{2}} (I_{n+10} + sI_{n+9} + \ldots\ldots s^9 I_{n+1})$$

assuming that immigration is constant from year to year and equal to I per annum.

$$I'_{n+10} = I'_n s^{10} + Is^{\frac{1}{2}} \frac{s^{10}-1}{s-1}$$

$$\text{or } I = \frac{s^{10}-1}{s^{\frac{1}{2}} (s^{10}-1)} (I'_{n+10} - I'_n s^{10}). \qquad \text{(II)}$$

Similarly

$$E'_{n+10} = E'_n s^{10} + E_{n+1} s^9 + E_{n+2} s^{8\frac{1}{2}} + \ldots\ldots + E_{n+10} s^{\frac{1}{2}}$$

assuming as before equal survival rates, and again assuming constant emigration,

$$E'_{n+10} = E'_n s^{10} + E s^{\frac{1}{2}} \frac{s^{10}-1}{s-1} \qquad \text{(III)}$$

Where E is the annual rate of emigration.

Thus
$$I - E = \frac{s-1}{s^{\frac{1}{2}} (s^{10}-1)} \left\{ I'_{n+10} - E'_{n+10} - s^{10} (I'_n - E'_n) \right\}$$

Call the inter-censal gain by migration M,

Then,
$$M = \frac{10\,(s-1)}{s^{\frac{1}{2}}\,(s^{10}-1)} \left\{ I'_{n+10} - E_{n+10} - s^{10} \, (I'_n - E'_n) \right\} \qquad \text{(IV)}$$

This result (IV) gives the calculated gain from migration from the number of persons recorded at each census as having been born inside a given area and enumerated outside it (E′) and born outside it and enumerated inside it (I′).

The assumption made of a survival proportional to the number of persons living at each age is probably not so true as the assumption of a definite constant decrement of population, especially between the ages of 36—76 (*vide* page 92, Census Report of England and Wales 1911). Call the annual decrement δ. Then our equations become

$$I'_{n+10}=I'_n\,(1-10\delta)+I_{n+1}\,(1-9\tfrac{1}{2}\delta)+I_{n+2}\,(1-8\tfrac{1}{2}\delta)+ \text{———————} + I_{n+10}\,(1-\tfrac{1}{2}\delta).$$

Writing as before

$$I_{n+1}=I_{n+2}=I_{n+3}=I_{n+4}\ldots\ldots\ldots\ldots\ldots\ldots=I \text{ for the annual}$$

immigration

$$I'_{n+10}=I'_n\,(1-10\delta)+I\,(10-50\delta)$$

therefore

$$10\,I=\frac{I'_{n+10}-I'_n\,(1-10\delta)}{1-5\delta} \qquad \text{(II A)}$$

and

$$10\,E=\frac{E'_{n+10}-E'_n\,(1-10\delta)}{1-5\delta} \qquad \text{(III A)}$$

these equations give the total migration (emigration and immigration) during the decade. If we put $\delta=20/1000=1/50$

$$10\,I=(I'_{n+10}-I'_n\,4/5)/(9/10)=10/9.\,I'_{n+10}-8/9.\,I'_n$$
$$=1/9\,(10.\,I'_{n+10}-8.\,I'_n).$$

We have seen how an approximate calculation of the immigration and emigration during an inter-censal decade may be made, leading to formulae II and III based on a geometric decrease of population, and to formulae II A and III A based on an arithmetic decrease of population, with age (Middleton's assumption.)

Let us write the total immigration and emigration in a decade as i and e respectively; then if b and d are the true number of births and deaths and R the inter-censal rise in population

$$R=b+i-d-e$$

so that $b-d=R-(i-e)$ (IV)

Let B and D be the total number of inter-censal births and deaths from the records of vital statistics. Then in general the recorded number of births and deaths will be less than the true number of births and deaths, so that $b>B$ and $d>D$, and we may write

$$b=B+k \qquad \text{and } d=D+k',$$

where k and k' are both greater than zero.
Hence $k-k'=(b-d)-(B-D)$
Thus the error in $(B-D)$ is $k-k'$; but this alone gives us no information as to the error of B or D separately, and the deduction (made in para. 25 of Chapter I of the Report) that when $k-k'$ is positive k' is zero, and when $k-k'$ is negative k is zero, is not justified.

It is now necessary to re-examine the whole question from thep oint of view of the probable errors of the census returns.

For convenience let us write the total number of immigrants and emigrants during the decade as 'i' and 'e' respectively, and the immigrants and emigrants enumerated at the two censuses as i_0, i_1, e_0, e_1. Then we have from the previous equations (II A and III A.)

$$i=\frac{i_1-i_0\,(i-10\delta)}{1-5\delta}=li_1-mi_0$$

and

$$e=\frac{e_1-e_0\,(i-10\delta)}{1-5\delta}=le_1-me_0$$

where $l=1/(1-5\delta)$ and $m=(1-10\delta)/(1-5\delta)$,
then

$$b-d=R-l\,(i_1-e_1)+m(i_0-e_0) \qquad \text{from (IV).}$$

Call the excess of immigrants over the emigrants s_0, s_1 at the respective censuses.

$$b-d=R-ls_1+ms_0$$

or $\quad b-d=p_1-p_0-ls_1+ms_0$

Call θ_r the standard error of any variable x, then (r being the correlation between the errors in any pair of variables)

$$\theta_{b-d}^2=\theta^2p_1+\theta^2p_0+l^2\theta^2s_1+m^2\theta^2s_0-2r\theta p_1\theta p_0-2rl\theta p_1\theta s_1+2rm\theta p_1\theta s_0+$$
$$2rl\theta p_0\theta s_1-2rm\theta p_0\theta s_0-2lmr\theta s_1\theta s_0$$

Let the proportionate standard errors be

v for p_o and p_1

w for s_o and s_1,

and let r be the same for all pairs of variables.

We assume that there is no error in l and m, so

$$\theta^2_{-d} = v^2(p_o^2 + p_1^2) + w^2(l^2 s_1^2 + m^2 s_o^2) - 2rv^2(p_o p_1) - 2rvw(l p_1 s_1) + 2rvwm p_1 s_o + 2rvwl p_o s_1 - 2rvwm p_o s_o - 2rlmw^2 s_1 s_o$$

where all the p's and s's are mean values.

$$\theta^2_{b-d} = v^2(p_o^2 + p_1^2 + 2rp_o p_1) + w^2(l^2 s_1^2 + m^2 s_o^2 - 2rlms_o s_1) - 2rvw(lp_1 s_1 - lp_1 s_o - lp_o s_1 + mp_o s_o)$$

Let us take a special case and put

$p_o = p_1 = p$ and $s_o = s_1 = s$

then

$$\theta^2_{b-d} = 2v^2 p^2 (1-r) + w^2 s^2 (l^2 + m^2 - 2rlm) - 2rvwps (l - m - l + m)$$
$$= 2v^2 p^2 (1-r) + w^2 s^2 (l^2 + m^2 - 2rlm)$$

Now we may write $\theta^2_{b-d} - \theta^2_b - \theta^2_d - 2r' \theta_b \theta_d$ and (r' being the correlation in errors of the birth and death figures.) assuming the error in the births and deaths are proportionate to their numbers

$$\theta^2_{b-d} = u^2 (b^2 + d^2 - 2r' b d)$$

where u is the proportionate error in b and d respectively

Putting in our special case $b = d$

$$\theta^2_{b-d} = 2u^2 b^2 (1 - r')$$

therefore

$$u^2 = v^2 \frac{p^2}{b^2} \cdot \frac{(1-r)}{(1-r')} + w^2 \frac{s^2}{b^2} \cdot \frac{(l^2 + m^2 - 2rlm)}{2(1-r')} \qquad \text{(V)}$$

This formula gives the proportionate standard error in the birth and death return (u) in terms of the proportionate census standard errors (v), in the standard error of enumeration in emigrants and immigrants (w), in the correlations in errors of the various census returns (r) and in errors of registration of births and deaths (r')

In applying the result (v) difficulties arise owing to our ignorance of the probable errors of the census, and of the values of the correlations.

We might expect the correlation of the errors in the populations at different censuses to be much smaller than those of births and deaths, the latter being based on returns made by the same men.

We may put as an example $r = 0{\cdot}4$ and $r' = 0{\cdot}7$

$$u^2 = v^2 \frac{p^2}{b^2} \cdot 2 + w^2 \frac{s^2}{b^2} \cdot \frac{l^2 + m^2 - \frac{8}{10} lm}{2 \times \frac{3}{10}}$$

as s/b is small we may neglect the second term and writing $p/b = 3$*

$u^2 = 18v^2$ or $u = v\sqrt{18}$

and if $v = 1\,\%$ $u = 4{\cdot}24\,\%$

u gives the calculated percentage standard error of the births or deaths in the decade determined from the census figures which latter we have assumed to have a standard percentage error of unity.

Lower limit of error in vital Statistics.

We get two groups of equations from the typical form

b-d-(B-D)=0.

which may be written as

b-B-(d-D)=0.

where we will take $b > B$ and $d > D$, *i.e.*, that the error in the vital statistics is always on the side of omission.

Call E_B the error in the number of births.

E_D " " deaths.

then suppose we find from the census returns and the returns of births and deaths that

$E_B - E_D = 0$, where E_B and E_D are both > 0

* Roughly $p = 25{,}000{,}000$ and $b = 8{,}500{,}000$

then we get (i) if $C>0$

$E_B > C$

(ii) if $C<0$

$E_D > C$

Hence if we take together all those districts for which $C>0$, we find on the average that $E_B/B>C$ say ; and if we take together all the districts for which $C<0$, we find on the average that $E'_D/D'>C'$.

Now it seems to be a reasonable assumption that in those districts where we know nothing about the error in the death-rate, that it amounts to a fraction 'k' of the lower limit of the error in the districts for which we have such knowledge.

Thus

$E_D/D=k.\ E'_D/D'$ and $E_B=E_D+C$

$E'_B/B'=k.\ E_B/B$

and approximately $B=D$ and $B'=D'$

Hence, $E_B/B=C/B+E_D/B$

$=C/B+E_D/D$

$=C/B+k.\ E'_D/D'$

Similarly

$E'_D/D'=C'/D'+k.\ E_B/B$, and $E'_D=E'_B+C'$

$=C'/D'+k.\ C/B+k.^2 E_D/D'$

or

$$\frac{E'_D}{D'}(1-k^2)=C'/D'+k.\ C/B$$

$$E'_D/D'=\frac{C'/D'+k.C/B}{1-k^2} \qquad \text{(IV)}$$

If we assume that $k=\frac{1}{2}$, this is equivalent to saying that the error in the death-rate in the districts where the birth-rate error is in excess is *half* the error in the death-rate in those districts in which the death-rate error is in excess, and the birth-rate is assumed to be wholly free from error.

Putting $C'/D'=7{\cdot}4$ and $C/B=4{\cdot}0$

$E'_D/D'=9{\cdot}4/\frac{3}{4}=37{\cdot}6/3=12{\cdot}5\ \%$ (error in death-rate)

and $E'_B/B'=5{\cdot}1$

$E_B/B=(4{\cdot}0+\frac{1}{2}\times7{\cdot}4)/\frac{3}{4}=10{\cdot}3\ \%$ (error in birth-rate)

and $E_D/D=6{\cdot}3$

thus the percentage errors in the birth-and death-rates in the districts where the birth-rate is more in error are 10·3 and 6·3, and in the districts where the death-rate is more in the error are 5·1 and 12·5.

The average error of birth and death-rates is thus

$$\frac{10{\cdot}3+6{\cdot}3+5{\cdot}1+12{\cdot}5}{4}=\frac{34{\cdot}2}{4}=8{\cdot}5\ \%$$

Another alternative is to assume that where the birth-rate is more in error than the death-rate, the error of the latter is k times ($k<1$) the former, and *vice versa*.

We shall then have,

$E_B/B=C/B+k{\cdot}E_B/B$

$E'_D/D'=C'/D'+k.E'_D/D'$.

$E_B/B.=C/B.\ \ 1/(1-k)$

$E'_D/D'=C'/D'\ \ 1/(1-k)$

Assuming that in the districts where the birth-rate is more in error than the death-rate that the latter is half the former, we get

$k=\frac{1}{2}$

$E_B/B=2C/B$

$E'_D/D'=2C'/D'$,

and assuming the same values of C and C′ as before, we get

	Errors in	
	Birth-rate	Death-rate
In Districts where the error in birth-rate is greater ..	8·0 %	4·0 %
In Districts where error in death rate is greater ..	14·8 %	7·4 %

The mean of these results is

$$\frac{8{\cdot}0+4{\cdot}0+14{\cdot}8+7{\cdot}4}{4}=\frac{34{\cdot}2}{4}=8{\cdot}5\ \%$$

On an average therefore 1 birth or death in 13 is not recorded.

The figures given below are the percentage errors on the recorded births. The actual births will number 108·5 to 100 recorded.

The percentage errors on the actual births will be

8·5/108·5=7·8 %

that is about 1 in 13.

Thus we reach the conclusion that *the vital statistics of the Punjab are likely to be about 7 or 8 per cent. in error*, and that, provisionally, errors of about 11 per cent. in the birth-rate and of say 5 per cent. in the death-rates may be adopted as probable. Finally it is clear that the census figures of 1911 and 1921 do not establish the accuracy of the vital statistics to a greater degree of accuracy than 7 or 8 per cent. of error.

Since making the above deductions slight arithmetical errors were discovered in Mr. Middleton's table on page 54, and the following revised table must be adopted instead:—

Calculation of the percentage errors of the birth and death returns on the assumptions that in any one district one at least of the returns is absolutely correct.

Districts.	Percentage excess error of	
	Birth-rate C positive.	Death-rate C negative.
1 Hissar	..	3·4
2 Karnal	..	1·2
3 Jullundur	0·9	..
4 Ludhiana	..	3·8
5 Ferozepore	0·09	..
6 Lahore	1·7	..
7 Amritsar	..	0·48
8 Simla	145·2	..
9 Kangra	..	4·4
10 Ambala	..	0·26
11 Hoshiarpur	..	4 27
12 Gurdaspur	..	8·5
13 Sialkot	..	8·0
14 Gujrat	..	12·61
15 Jhelum	..	9·36
16 Rawalpindi	..	6·18
17 Attock	..	16·6
18 Montgomery	22·6	..
19 Shahpur	25·4	..
20 Mianwali	..	9·8
21 Lyallpur	..	9·7
22 Jhang	..	8·0
23 Multan	..	5·79
24 Muzaffargarh	..	7·29
25 Dera Ghazi Khan	..	13·3
Total ..	195·89	132·94
Average ..	32·65	7·0

If we adopt the corrected values of the excess errors in the birth and death-rates instead of Middleton's values, then excluding Simla, the percentage excess error is

10·14 % for the birth-rate

7·00 % for the death-rate.

Let us take these as 10 % and 7 % respectively,

i. e., C/B=10 and C′/D′=7

(i) Then on the assumption that the error in the death-rate in the districts where the birth-rate error is in excess is half the average error in the districts where the minimum can be fixed.*

$$E_B/B = C/B + \tfrac{1}{2}\ E'/D'$$
$$E'_D/D = C'/D' + \tfrac{1}{2}.\ E/B$$

We get

$$E_B/B = 18,\quad E_D/D = 6,\quad E'_{D'}/D' = 12,\quad E'_B/B' = 9$$

Average $= \dfrac{18+12+6+9}{4} = 11{\cdot}25\ \%.$

(ii) On the assumption that the error in the birth-rate, where the death-rate error is in excess, is $\frac{1}{2}$ the error in the death-rate, and *vice versa.*

$$E'\ /D' = C'/D' + \tfrac{1}{2}\ E'_D/D'$$
$$E_B/B = C/B + \tfrac{1}{2}.\ \ E_B/B$$

We get

$$E_B/B = 20,\quad E_D/D = 10,\quad E'_{D'}/D' = 14,\quad E'_{B'}/B' = 7.$$

Average error $= \dfrac{20+14+10+7}{4} = 12{\cdot}75\ \%.$

Taking the mean of the two results we may say that the average error of the birth and death-rates, *assuming the censuses are correct*, is 12 %.

If we treat this as the standard error and adopt an estimate of 1 % for the standard error of a census, the standard error of the birth- and death-rates is given by

$$E_V{}^2 = (12)^2 + (4{\cdot}24)^2$$
$$= 144 + 18 = 162$$
$$E_V = 12{\cdot}7\ \%$$

This is the percentage error on the recorded births and deaths. Assuming the errors are always in defect the percentage error on the actual births and deaths is

$$\frac{12{\cdot}7 \times 100}{112{\cdot}7} = 11{\cdot}3\ \%$$

This result is still more unfavourable to the accuracy of the vital statistics, and it may exaggerate their incorrectness.

However it is clear that whatever the standard error in the vital statistics is, whether 5, 8, or 11 per cent., we are very far from being justified in assuming these statistics to be really close to the truth.

* Note that dashes indicate that we are dealing with districts in which the death-rate error is in excess.

APPENDIX 2.

The relationship between density of rural population per square mile with the District percentage of cultivated area.

Briefly, there is, as Mr. Middleton states a clear association between density of rural population and percentage of cultivated area in each District, but the conclusion that density of population increases faster than the percentage of the cultivated area, can hardly be said to be established without a laborious analysis. Speaking statistically the law of density could only be accepted, if it were shown—

(*a*) that the regression of density of population on percentage of cultivated area is not linear.

(*b*) that the regression curve is concave upwards.

Now, the testing of these points, making allowance for the errors due to the smallness of the sample, is a considerable task; but we can get an approximate result by fitting the data with second and third order parabolæ. If this is done we find (calling "D" the rural density per square mile, and "k" the percentage of cultivated area)

$$D = -23{\cdot}260 + 6{\cdot}989\,k - {\cdot}026\,k^2$$

$$D = 23{\cdot}741 + 4{\cdot}005\,k + {\cdot}023\,k^2 - {\cdot}0002\,k^3$$

These equations show that—

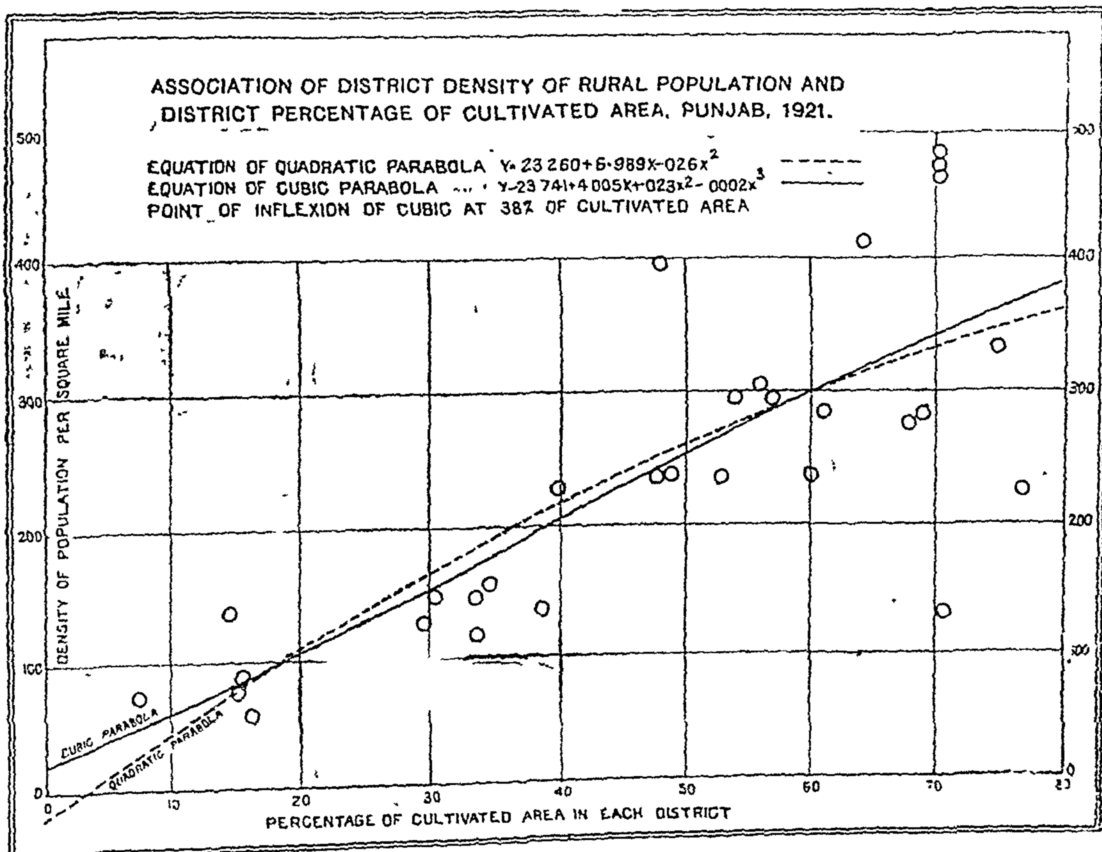
(*a*) the relation of density to cultivated area is expressed very nearly by a straight line, both the square and cubic terms being small up to a percentage of 80 for the cultivated area, which is above the limit found in this data;

(*b*) as judged by the quadratic the curvature is convex upwards, which is exactly the opposite conclusion to that reached in paragraph 18;

(*c*) as judged by the cubic, there is an almost negligible concavity upwards for values of k less than 38 per cent., but that for higher values of k the curve is once more convex upwards.

It is by no means certain, without a much fuller analysis, whether the curvature would be positive or negative, if the errors of random sampling could be eliminated, and it is not intended to set up any law in opposition to that of Mr. Middleton. Unless, however, he has used other and wider material than that discussed here, judgment as to the nature of the divergence from linearity of the association of density of population and cultivated area must be suspended. In fact one might in slang phrase say that the data give a very good imitation of linear relationship.*

The data and the quadratic and cubic parabolæ are shown in the diagram below—

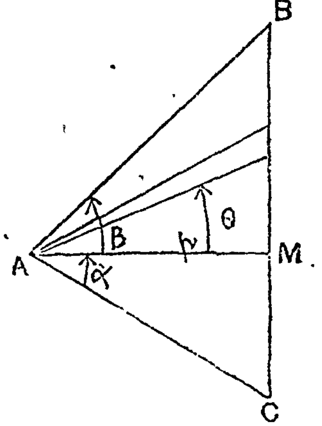


*This does not mean, of course, that there is alone one correspondence between density and percentage of cultivated area. Even if the correlation is skew, it is certainly not perfect—a point no doubt which Mr. Middleton implied, though he did not state it.

APPENDIX 3.

Mean Scalar Distance.

Let us find the mean scalar distance of a triangle A B C from the Apex A.



The value is given by

$$\overline{S} = \frac{\iint r^2 \, d\theta \, dr}{\iint r \, d\theta \, dr},$$ integrated over the area of the triangle.

The limits of r are 0 and p sec. θ , for $0 < \theta < \beta$

The limits of r are 0 and p sec. θ , for $0 < \theta < \alpha$

where α and β are the angles which the perpendicular p makes with the sides A C and AB respectively.

Call the area of the triangle A, then

$$A\overline{S} = \int_0^{\beta} \int_0^{p \sec.\theta} r^2 \, dr \, d\theta + \int_0^{\alpha} \int_0^{p \sec.\theta} r^2 \, dr \, d\theta$$

$$= \int_0^{\alpha} \frac{p^3 \sec.^3 \theta}{3} \, d\theta + \int_0^{\beta} \frac{p^3 \sec.^3 \theta}{3} \, d\theta$$

$$= \frac{p^3}{3} \left[\int_0^{\alpha} \sec.^3 \theta \, d\theta + \int_0^{\beta} \sec.^3 \theta \, d\theta \right]$$

Now $\int \sec.^3 \theta \, d\theta = \int \sec.\theta \, d \tan\theta$

$$= \sec.\theta \tan\theta - \int \tan\theta \sin\theta \sec.^2 \theta \, d\theta$$

$$= \sec.\theta \tan\theta - \int \sin^2 \theta \sec.^3 \theta \, d\theta$$

$$= \sec.\theta \tan\theta - \int d\theta \sec.^3 \theta + \int \sec.\theta \, d\theta$$

$$\therefore 2\int \sec.^3 \theta = \sec.\theta \tan\theta + \log\tan\left(\frac{\pi}{4} + \frac{\theta}{2}\right)$$

Thus

$$\frac{A\overline{S}}{A\overline{S}} = \frac{p^3}{6}\left[\sec.\ \alpha \tan \alpha + \sec.\ \beta\ \tan \beta + \log\ \tan\left(\frac{\pi}{4} + \frac{\alpha}{2}\right)\right.$$

$$\left. + \log \tan\left(\frac{\pi}{4} + \frac{\beta}{2}\right)\right]$$

$$= \frac{p^3}{6}\left[\sec.\ \alpha \tan \alpha + \sec.\ \beta\ \tan\ \beta + \log \tan\ \left(\frac{\pi}{4} + \frac{\alpha}{2}\right) \tan\ \left(\frac{\pi}{4}+\frac{\beta}{2}\right)\right]$$

If the triangle is isosceles $\alpha = \beta$, and the mean scalar distance is then

$$\overline{S} = \frac{p^3}{3\ A}\left[\sec.\ \alpha\ \tan \alpha + \log\ \tan\ \left(\frac{\pi}{4} + \frac{\alpha}{2}\right)\right]$$

Now we have for the triangles formed by joining the terminals of a side to the centre the following values of α.

Figure.	α	Sec α tan α	Log $\tan\left(\frac{\pi}{4}+\frac{\alpha}{2}\right)$	Sum cols. 4 and 3.	$p^3/A^{\frac{3}{2}}$	$3\ \overline{S}/\sqrt{A}$.	$\overline{S}/\sqrt{Q}$
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Hexagon ..	30°	·666667	·5493061	1·215973	2·279507	2·771819	·377197
Square ..	45°	1·414214	·8813736	2·295588	1	2·295588	·382598
Equilateral triangle	60°	3·464102	1·3169577	4·781060	1/2·279507	2·097410	·403647

Now call Q the whole area of the figure,

i. e., Q=6A for the hexagon

=4A for the square

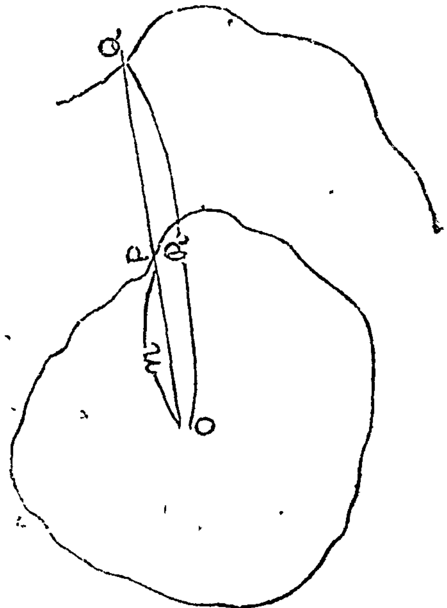
=3A for the triangle (equilateral)

For a circle from the centre $\overline{S}/\sqrt{Q}$=·376126

Returning to the general formula, a graphic method of determining the mean scalar distance, applicable to an irregular boundary, will be developed.

We have

$$\overline{S} = \frac{\iint r^2\ d\theta\ d\ r}{\iint r\ d\theta\ dr}, \text{ integrated over the whole area of the figure.}$$



Let O be the point from which the mean scalar distance is to be determined.

Let P be any point in the boundary.

Let Q be a point on O P (produced if necessary), such that

$$O\,P^3 = l.\ O\,Q^2$$

then if O Q=R, we get $3\,r^2\,\delta r = 2\,l.\ R\,\delta R$

and

$$\bar{S} = \frac{\iint \frac{2}{3}\, l\, R\, d\theta.\ dR.}{\iint r\, d\theta\ \ dr}$$

where the integrals extend over the outer and the inner curves respectively.

Calling $\triangle$ the area of the original curve

$\triangle'$ the area of the constructed curve

$$\bar{S} = \frac{2}{3}\,\frac{\triangle'}{\triangle}.\, l$$

and the mean scalar distance can at once be obtained planimetrically.

Let l be the unit of length on which O P is measured

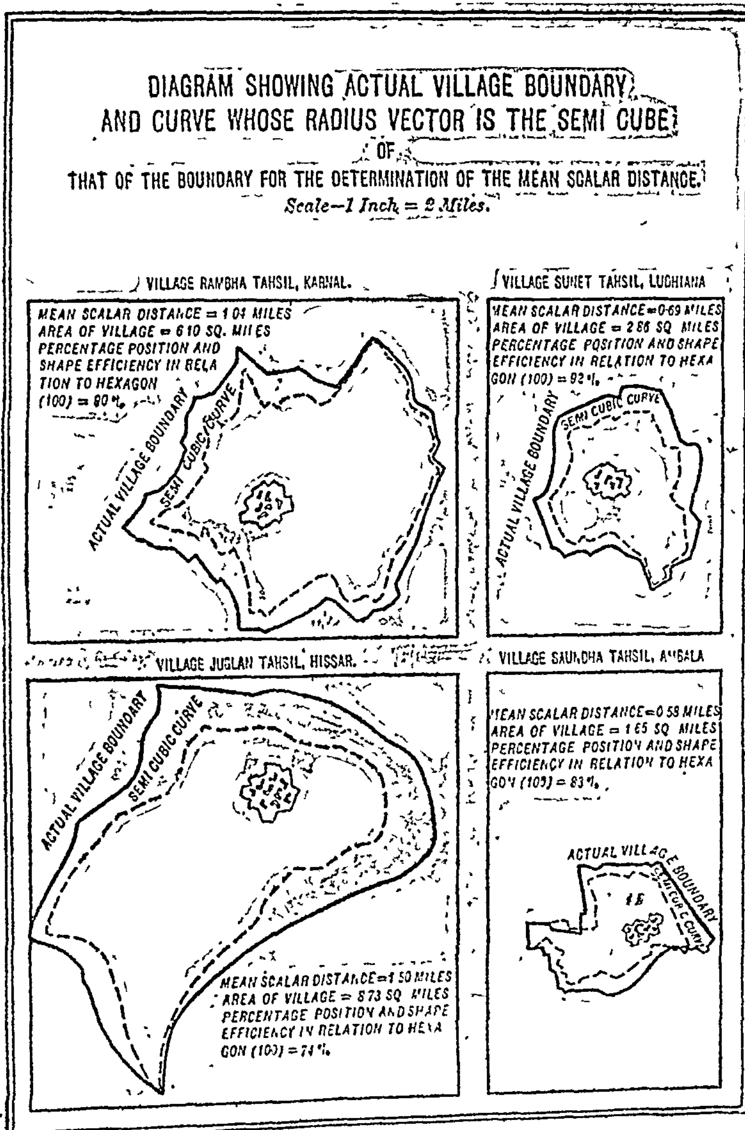
$$l = \frac{O\,P^3}{O\,Q^2}$$

and where O P=O Q we get,

$$l = O\,P = O\,Q.$$

In order to calculate graphically the mean scalar distance for any contour from any point, it will suffice to measure the area of the two curves in the same unit, and multiply two-thirds of their quotient by the distance adopted as unity, for which the two radii vectors are equal.

The contours of 4 villages together with the semi-cubical curve for the calculations of the mean scalar distance are shown in the attached diagram. The relative data for these, and 2 other villages are given in the statement below, and the figures in col. 7 of this statement show that the shape of the village boundary and the position of the abadi, is far from being as favourable to agricultural operations as they might be.



No.	Village.	District.	Tahsil.	Area in square miles.	·377197√A Mean scalar distance for hexagonal boundary of (A)	Actual mean scala distance. $\overline{S}_a$	Percentage efficiency of shape and position of abadi($\overline{S}_o/\overline{S}_a \times 100$)	REMARKS.
1	2	3	4	5	6	7	8	9
1	Juglan ...	Hissar ...	Hissar ...	8·7324	1·114617	1·498037	74 3	
2	Rambah ...	Karnal ...	Karnal ...	6·0986	·931077	1·037739	89 8	
3	Sundah ...	Ambala ..	Ambala ...	1·6473	·483944	·579858	83·5	
4	Maina ...	Rohtak ...	Rohtak ...	3·1430	·657832	·718351	91·6	
5	Sunet ...	Ludhiana ...	Ludhiana ...	2·8618	·637840	·689661	92·4	
6	Ladhewali ...	Jullundhar ...	Jullundhar ...	1·1872	·402092	·445322	90·3	

APPENDIX 4.

MORTALITY FROM VARIOUS DISEASES.

(A). The annual death-rate from 1867 to 1921 (inclusive) from (1) cholera, (2) small-pox, (3) bowel complaints, (4) plague, (5) fevers, (6) all "other" causes, and (7) all causes, (B)—The seasonal variation of the deaths from the above causes for the 2 periods 1867—1896 (30 years) and 1897—1921 (25 years). (C).—A comparison of the urban and rural death-rates from the causes enumerated in (A) above.

The object of this Appendix is merely to summarise in convenient form the broad statistical features of the deaths as classified in the Public Health returns since 1867.

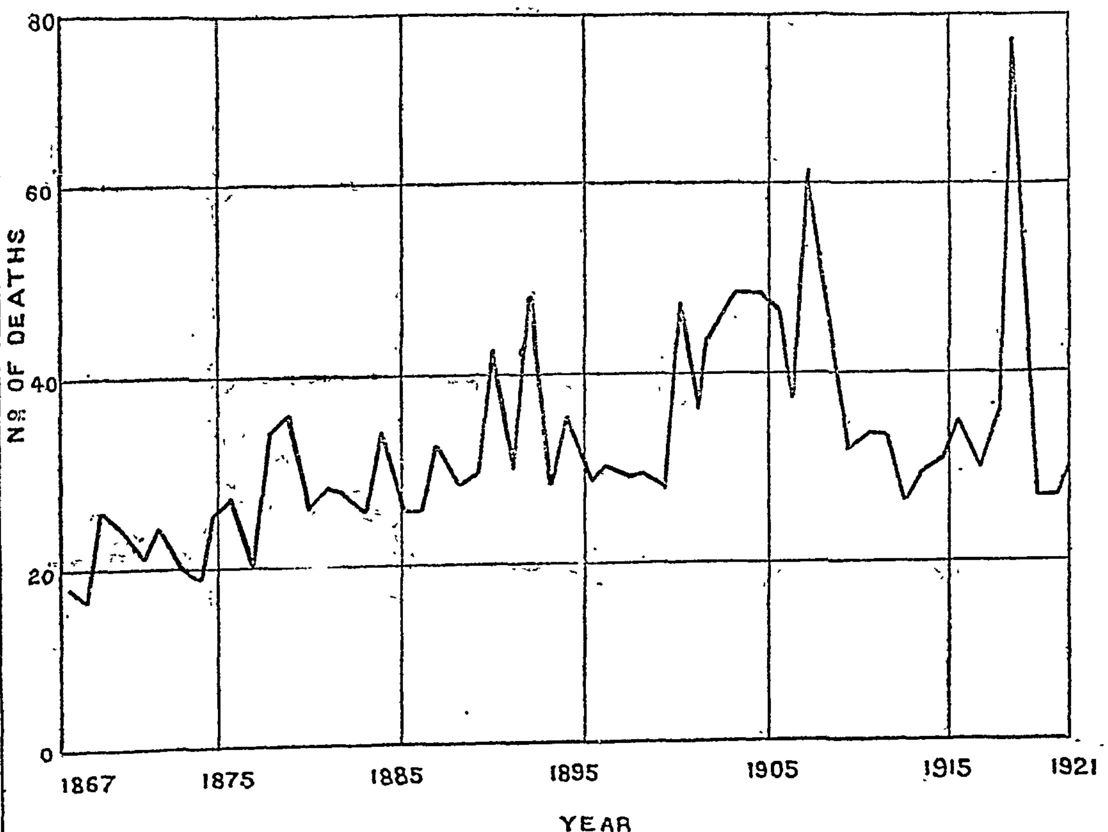
The three sections into which the Appendix is divided will be taken seriatim.

(A).—The annual death-rate from 1867 *to* 1921 (*inclusive*) *from* (1) *cholera,* (2) *small-pox,* (3) *bowel complaints,* (4) *plague,* (5) *fevers,* (6) *all " other " causes,* (7) *all causes.*

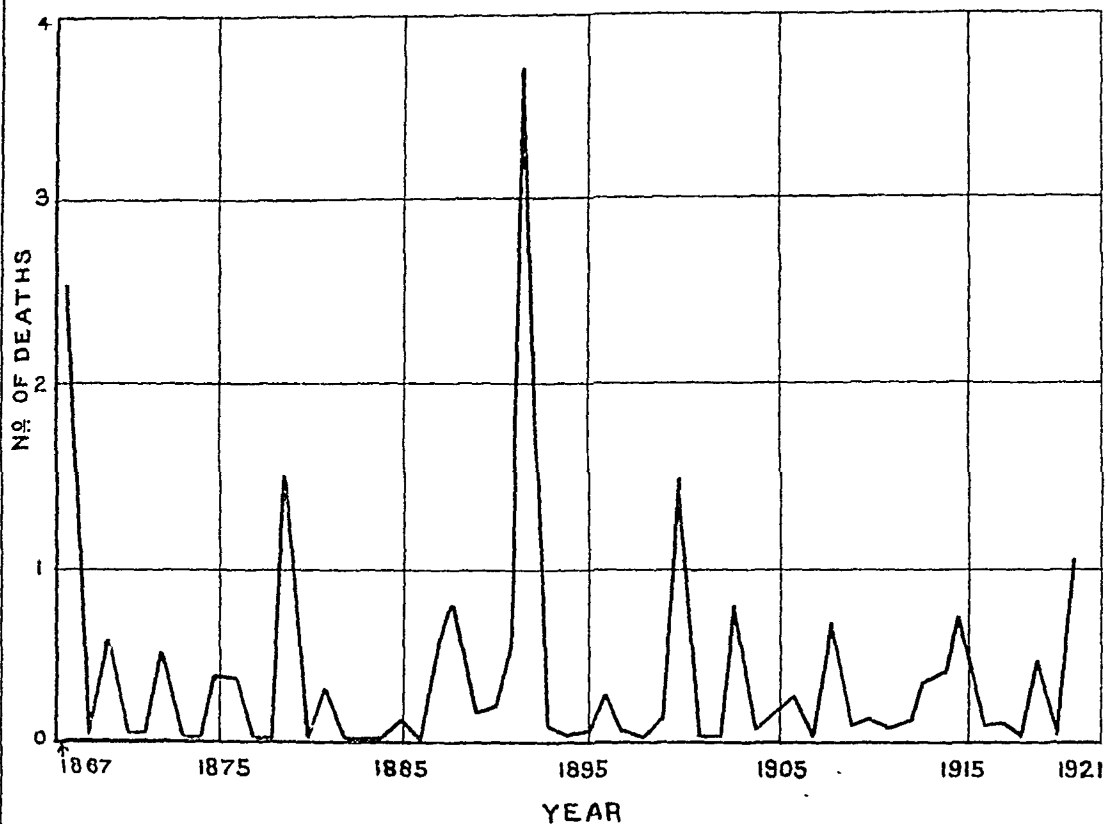
The death-rates have all been calculated afresh from the original data of mortality from each disease for the Punjab (British Territory) as constituted from time to time, the North-West Frontier Province being excluded from 1900 and onwards. The actual census returns for 1868, 1881, 1891, 1901, 1911 and 1921 have been used for the years named; but for the inter-censal periods the population has been found by intercalating geometric series, whose end terms coincide with the actual census populations. The whole set of enumerated and calculated populations is shown in the table in statement 1. For the sake of comparison of the growth of the population before and after the separation of the North-West Frontier Province the figures for the territory comprised in this Province have been added to the Punjab figures since 1900 (inclusive). The figures suffer from the defect (so far as comparison goes) of the exclusion since 1911, of the part of the Delhi population which lies to the west of the Jumna for which separate figures are not available in the tables.

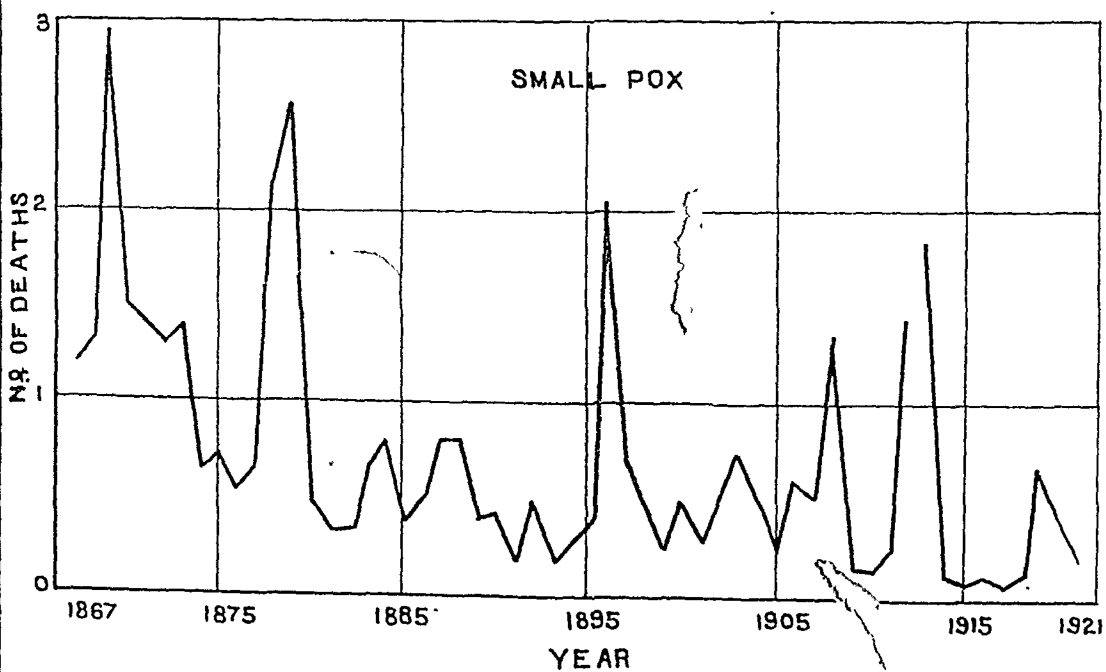
The interpolated population will differ from the actual population, sometimes by large amounts, and it would have been better to use the vital statistics of births and deaths to determine the population at one census from that of the preceding census, and then apply a geometric progression to the residual differences between the calculated and observed populations at the later census.

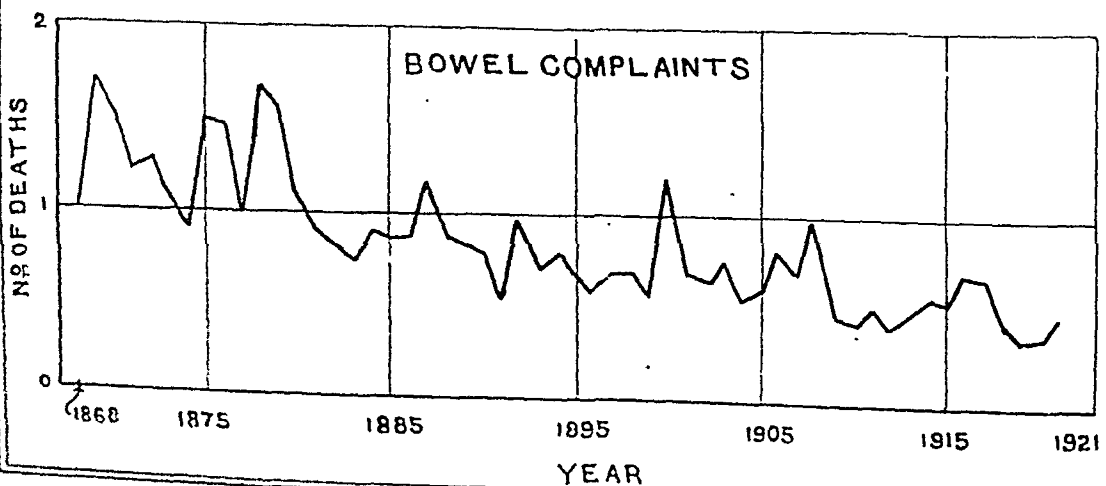
The diagrams may now be consulted.



NUMBER OF DEATHS IN THE PUNJAB PER MILLE OF THE POPULATION



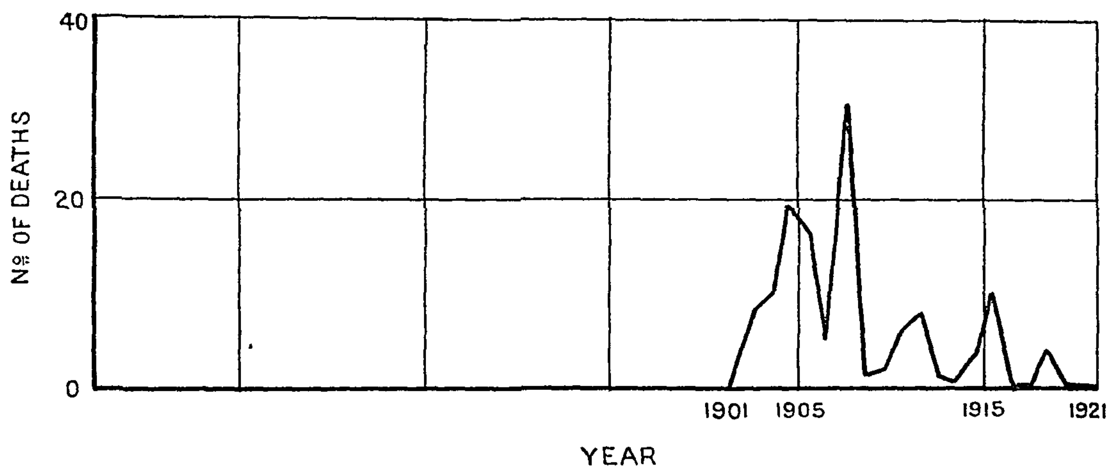


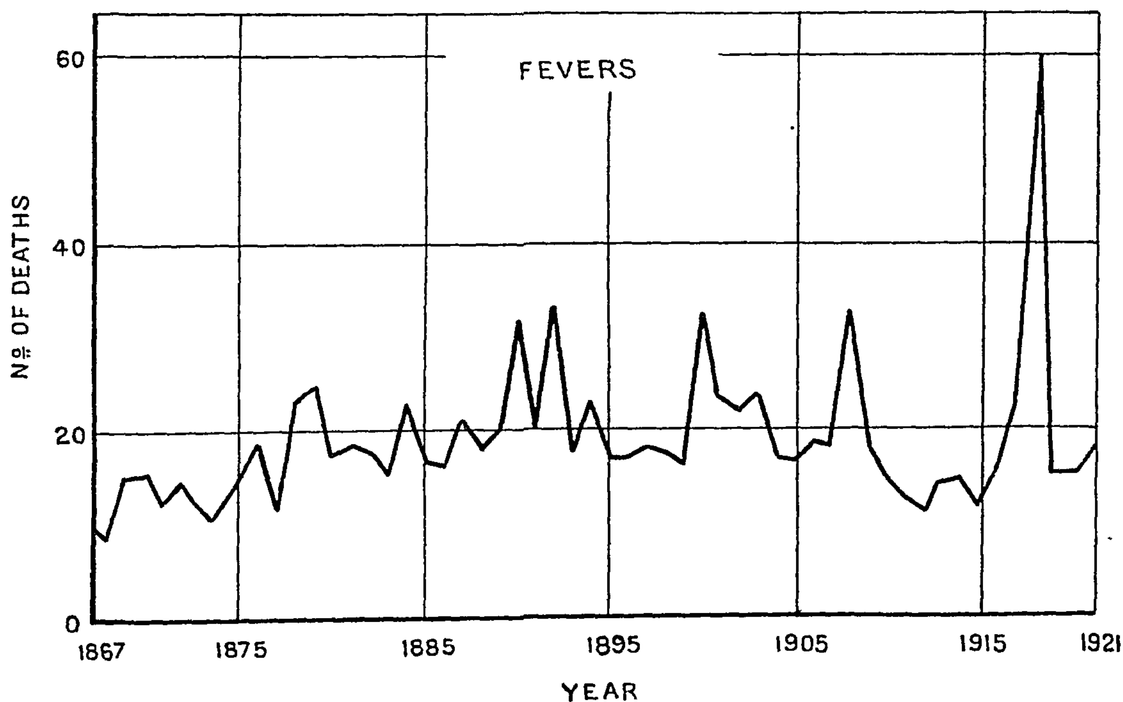


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NUMBER OF DEATHS IN THE PUNJAB PER MILLE OF THE POPULATION

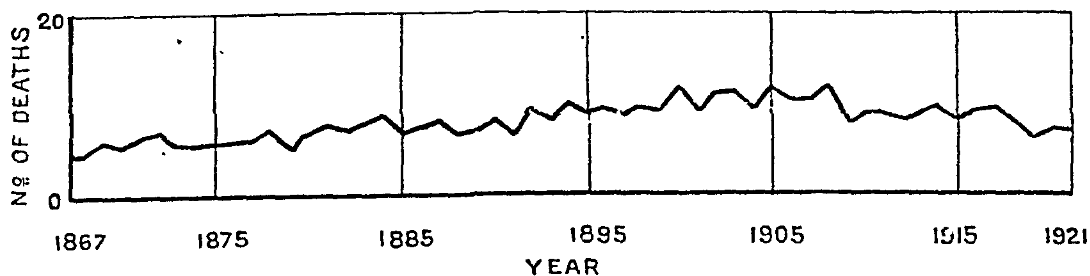
PLAGUE.





ALL OTHER CAUSES

THIS INCLUDES DEATHS FROM INJURIES & RESPIRATORY DISEASES ALSO.



No.6366-8-120

(B)—The seasonal variation of deaths.

The seasonal mortality has been studied by Newsholme's method, in which the average daily death-rate is determined in two ways (1) by dividing the total mortality of the month by the number of days in the month, and (2) by dividing the total mortality of the year by the number of days in the year. The ratio of the quotient in (1) to the quotient in (2), expressed as a percentage gives a measure of the relative intensity of the disease month by month, as compared to the average intensity throughout the year. The percentages for each month, year by year, having been determined, the mean monthly intensity and the standard deviation are readily determined for any particular group of years. In the present case the statistics for 1867—1921 have been divided into two groups, namely, 1867—1896 (30 years) and 1897—1921 (25 years), the objects aimed at being (1) to obtain eventually a comparative series of groups each of 30 years' duration as the figures for future years become available; (2) to distinguish the pre-colony era from the colony era that was inaugurated by the starting in 1897 of the Lower Chenab Canal, and (3) to discriminate the seasonal variations which arise from chance from those which are basic, and may, therefore, be expected to be common to both groups of years.

The diagrams below give the means and co-efficients of variation of the mortality rates calculated in the manner described for each month for the two groups of years separately.

(C) Comparison of the urban and rural death-rates from various diseases.

The full statements of the deaths year by year from each disease in rural and urban areas are too lengthy to be reproduced. From the tables only the following results are noted :—

Disease.	Average of the annual death-rates *per mille.*	
	Rural areas.	Towns.
Cholera (1877—1921, excluding 1885—1888)	0·30	0·56
Small-pox (1877—1921, excluding 1885—1888)	0·61	0·94
Plague (1901—1921)	6·53	4·73
Fevers (1877—1921, excluding 1885—1888)	22·88	20·60
Bowel complaints (1877—1921, excluding 1885—1888)	0·66	2·51
Respiratory diseases (1902—1921)	2·32	5·77
Injuries (1877—1921, excluding 1885—1888)	0·35	0·40
All "other" causes (1877—1921, excluding 1885—1888)	6·80	11·20
All causes (1877—1921, excluding 1885—1888)	36·04	41·58

We may summarise the statistical conclusions indicated by the 3 classes of figures in respect of each disease. The medical expert must interpret them in the light of his own technical knowledge.

CHOLERA.

General trend.—The mortality from cholera shows no signs of general diminution in the 55 years 1867—1921.

Seasonal variation.—Cholera is most evident during the summer months ; though there is a very marked difference between the seasonal variation in the 1st and 2nd group of years. During 1867—1896 the cholera mortality curve had a double hump, but is only singly humped in the later years 1897—1921. Light is thrown on this phenomenon by considering separately years of high, medium, and low cholera mortality, as it is found that the years of medium and low mortality exhibit a double hump, the first in May or June, the second in September ; while years of high mortality have only a single maximum in August.

The variability of deaths from cholera (shown by the dotted lines on the diagrams) is very high, as might have been anticipated from its epidemic character.

Urban and rural areas.—Cholera produces a much greater mortality in towns than in villages. Out of 39 years the rural areas had a greater cholera mortality in only 7 years.

SMALL-POX.

General trend.—The seasonal variation curves for 1867—1896 and 1897—1921 agree very closely : so do their variabilities. Maximum mortality is to be expected in May. December is the month in which there is the greatest uncertainty as to an outbreak.

Urban and rural areas.—Small-pox causes 1½ times the proportionate number of deaths in towns than it does in villages. In only 8 years out of 39 was there a greater rural than urban mortality.

BOWEL COMPLAINTS.

General trend.—There appears to be a very steady tendency for deaths from bowel complaints to diminish, and since 1900 the death-rate has not exceeded 1 *per mille.*

Seasonal variation.—The incidence of bowel complaints is greatest at two parts of the year, May and October. The variability is low, in no case exceeding 25 per cent., the causes which produce bowel complaints being apparently more or less similar in character and intensity from year to year.

Urban and rural areas.—Town dwellers are essentially more subject to bowel complaints than residents in rural areas. Out of 41 years 1877—1884 and 1889—1921, in no single year was the mortality in urban less than in rural areas from this cause.

PLAGUE.

General trend.—So far as any general tendency is exhibited by a disease which appears first in recent Punjab history in 1901, it might be supposed that plague is disappearing.

Seasonal variation.—The data are too limited for a secure determination.

Urban and rural areas.—Rural areas suffered more than urban areas in 12 out of 21 years ending 1921.

FEVERS.

General trend.—Since 1885 the general tendency appears to be for a constancy of the death-rate from fevers : the high mortality in 1918 is due to the Influenza epidemic.

Seasonal variation.—Two maxima appear in the seasonal chart. One in May-June is due to relapsing fever—the other in October-November to malaria. The variability is low, for the most part being below 30 per cent., consonant with the endemic character of these diseases.

ALL "OTHER" CAUSES.

General trend.—This appears to have been upwards from 1867 to 1908, with a slight tendency to diminish since.

Seasonal variation.—As might have been expected there is very little variation from month to month in the deaths from "other" causes, which includes deaths from all sources except cholera, small-pox, bowel complaints, plague and fevers. Agreeably with this the co-efficients of variation are very small; in February, July and August they are below 10 per cent. in both groups of years.

Urban and rural areas.—Deaths from "other" causes in towns always outnumber proportionately the numbers of deaths in rural areas.

ALL CAUSES.

General trend.—The general death-rate whether due to physiological causes or to a better reporting agency, rose, on the whole, from 1867—1890; since then it appears to be on the average fairly stationary, though there was great mortality in 1908 and 1918.

Seasonal variation.—Deaths from fevers constitute about 75 per cent. of all deaths in the Punjab, and the seasonal variation accordingly follows the fever chart fairly closely.

Urban and rural areas.—The general urban death-rate is greater than that in the rural areas in 37 out of 41 years.

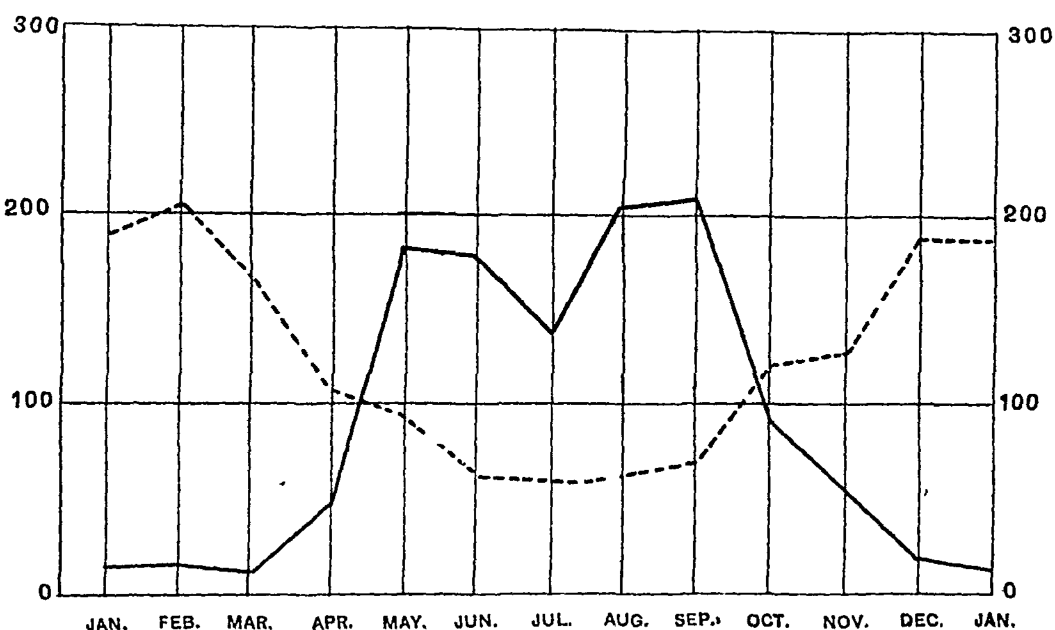
STATEMENT 1.

Statement showing the population of Punjab from 1867 to 1921 (calculated).

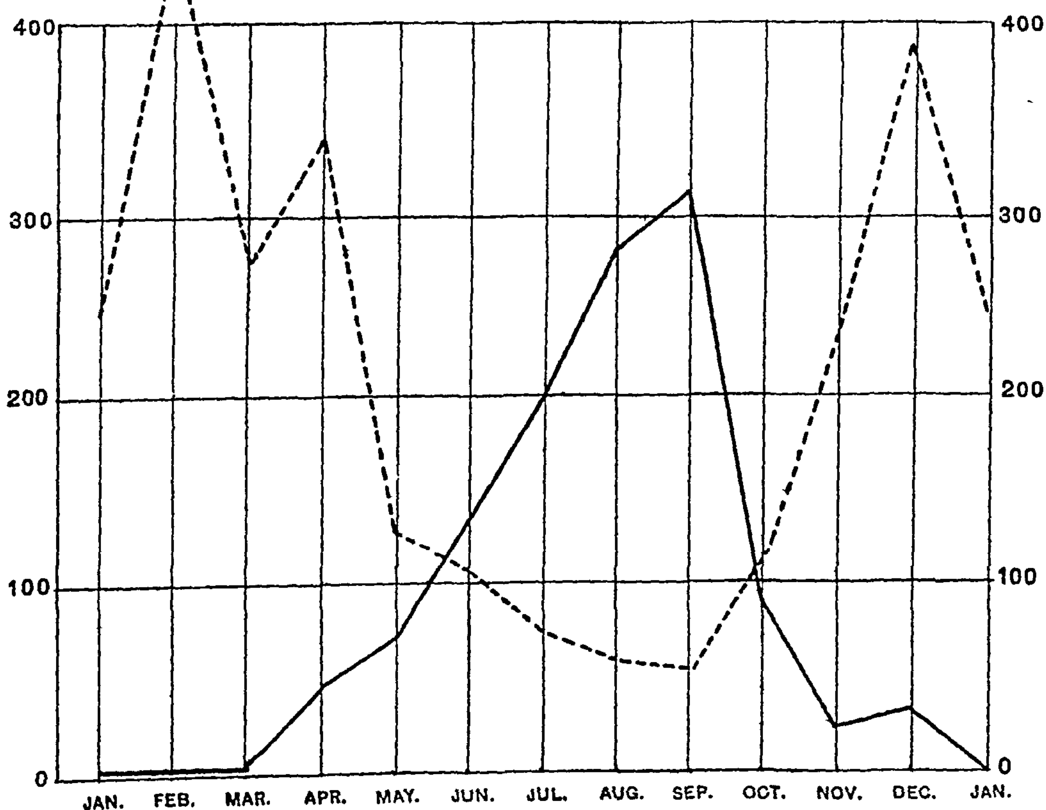
No.	Year.	Population of the British Punjab.	No.	Year.	Population of the British Punjab.	Population of Punjab as comprised prior to 1900.
1	1867 ..	17,611,498	29	1895 ..	21,488,470	
2	1868 ..	17,611,498	30	1896 ..	21,646,766	
3	1869 ..	17,703,839	31	1897 ..	21,806,210	
4	1870 ..	17,796,665	32	1898 ..	21,966,822	
5	1871 ..	17,889,971	33	1899 ..	22,128,624	
6	1872 ..	17,983,770	34	1900 ..	20,330,339	22,291,014
7	1873 ..	18,078,079	35	1901 ..	20,330,339	22,455,819
8	1874 ..	18,172,864	36	1902 ..	20,294,517	22,586,175
9	1875 ..	18,268,143	37	1903 ..	20,258,756	22,717,295
10	1876 ..	18,363,932	38	1904 ..	20,223,056	22,849,155
11	1877 ..	18,460,214	39	1905 ..	20,187,437	22,981,802
12	1878 ..	18,557,006	40	1906 ..	20,151,859	23,115,212
13	1879 ..	18,654,310	41	1907 ..	20,116,362	23,249,408
14	1880 ..	18,752,107	42	1908 ..	20,080,926	23,384,367
15	1881 ..	18,850,437	43	1909 ..	20,045,531	23,520,113
16	1882 ..	19,042,975	44	1910 ..	20,010,217	23,656,644
17	1883 ..	19,237,493	45	1911 ..	19,974,956	23,793,983
18	1884 ..	19,431,000	46	1912 ..	20,044,848	23,983,764
19	1885 ..	19,632,514	47	1913 ..	20,115,000	24,175,091
20	1886 ..	19,883,045	48	1914 ..	20,185,372	24,367,918
21	1887 ..	20,035,631	49	1915 ..	20,256,004	24,562,281
22	1888 ..	20,240,271	50	1916 ..	20,326,895	24,758,210
23	1889 ..	20,447,022	51	1917 ..	20,398,026	24,955,677
24	1890 ..	20,655,866	52	1918 ..	20,469,356	25,154,737
25	1891 ..	20,866,847	53	1919 ..	20,541,026	25,355,392
26	1892 ..	21,020,552	54	1920 ..	20,612,896	25,557,641
27	1893 ..	21,175,384	55	1921 ..	20,685,024	25,761,500
28	1894 ..	21,331,364				

DEATHS IN THE PUNJAB FROM CHOLERA
THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE
FIRST GROUP OF 30 YEARS 1867–1896.

MEAN PERCENTAGES ————
COEFFICIENTS OF VARIATION - - - - - -



SECOND GROUP OF 25 YEARS 1897–1921.



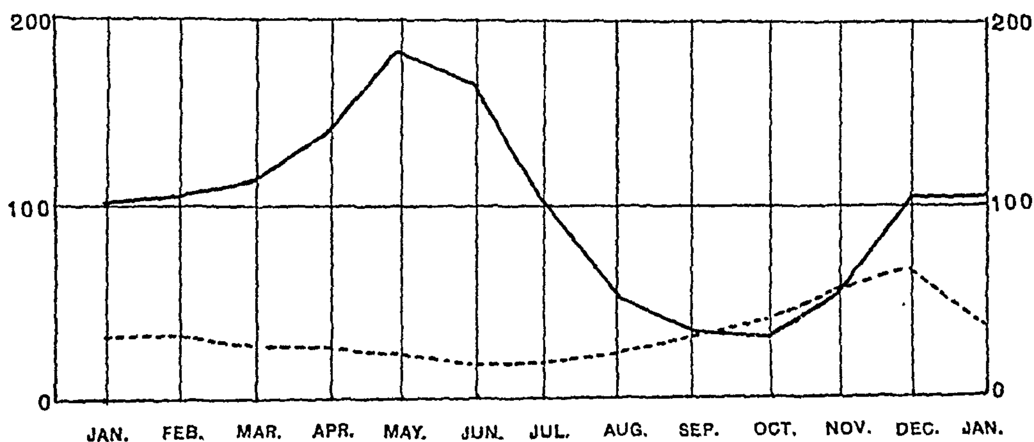
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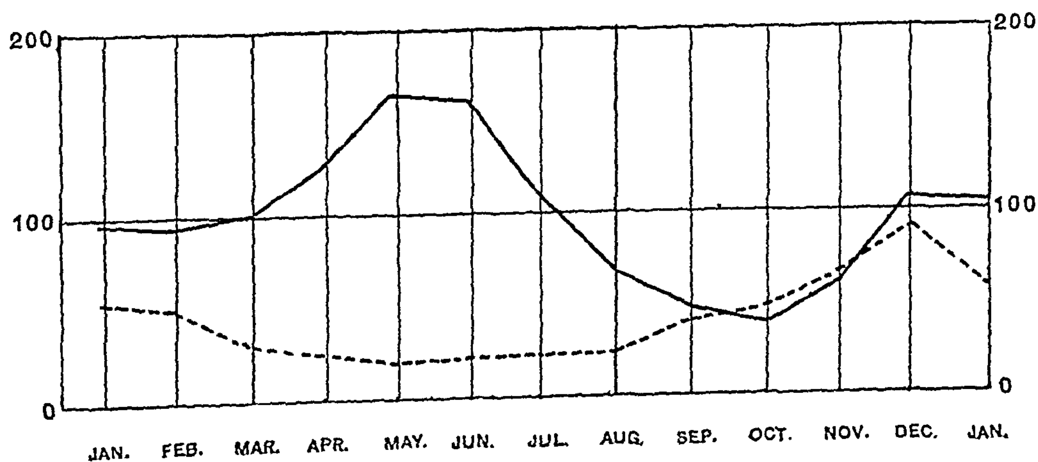
DEATHS IN THE PUNJAB FROM SMALLPOX
THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE
FIRST GROUP OF 30 YEARS 1867–1896.

MEAN PERCENTAGES ————

COEFFICIENTS OF VARIATION - - - -



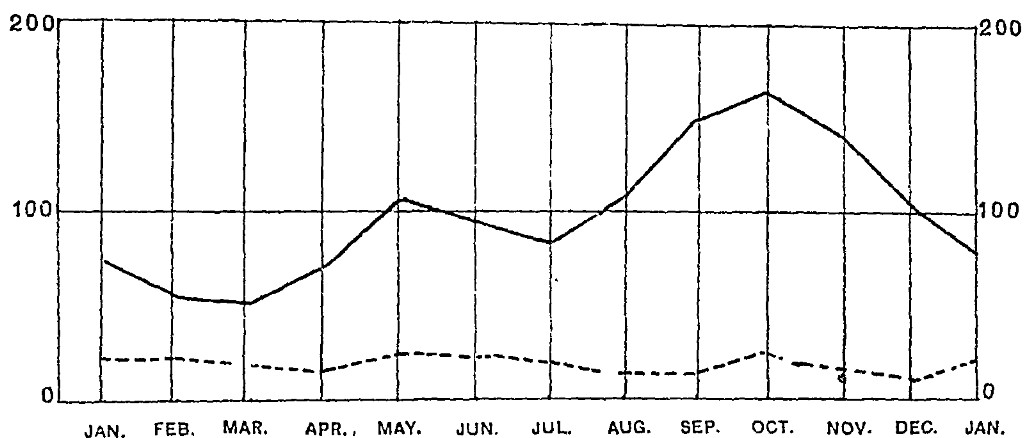
SECOND GROUP OF 25 YEARS 1897–1921.



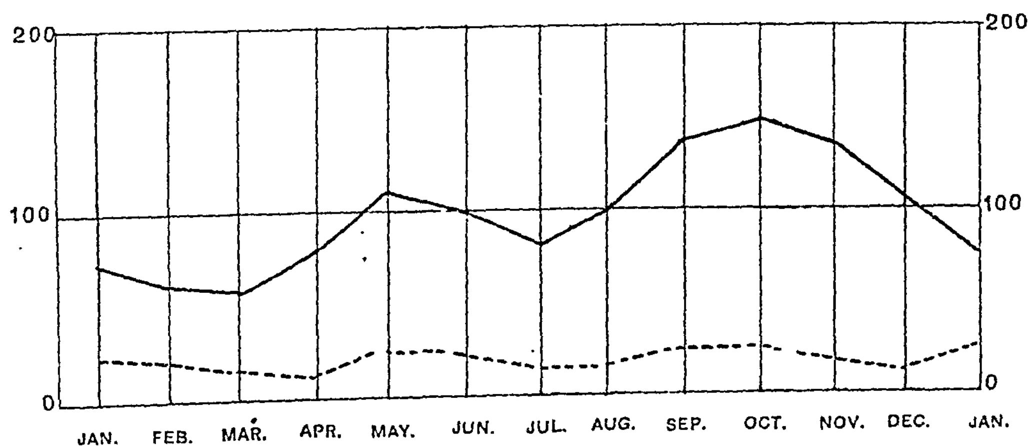
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DEATHS IN THE PUNJAB FROM BOWEL COMPLAINTS
THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE
FIRST GROUP OF 29 YEARS 1868–1896.

MEAN PERCENTAGES ——————
COEFFICIENTS OF VARIATION - - - - -



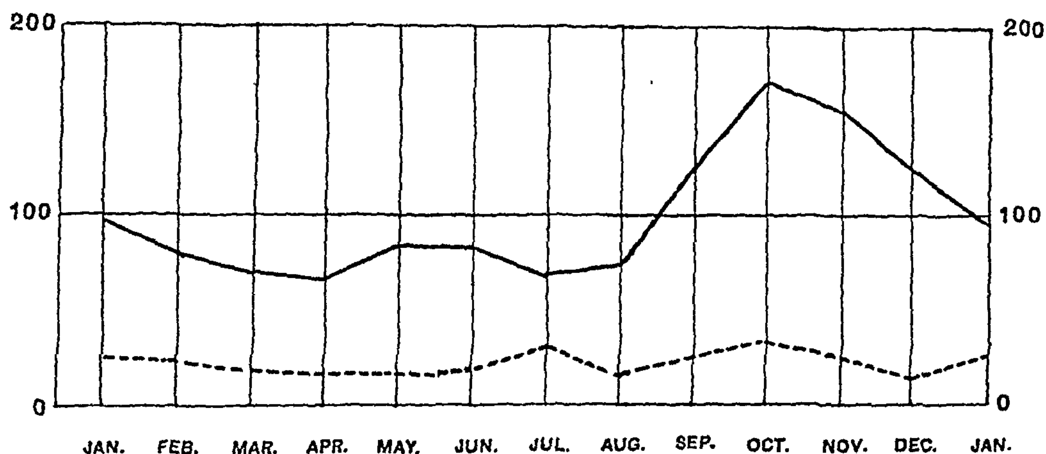
SECOND GROUP OF 25 YEARS 1897–1921.



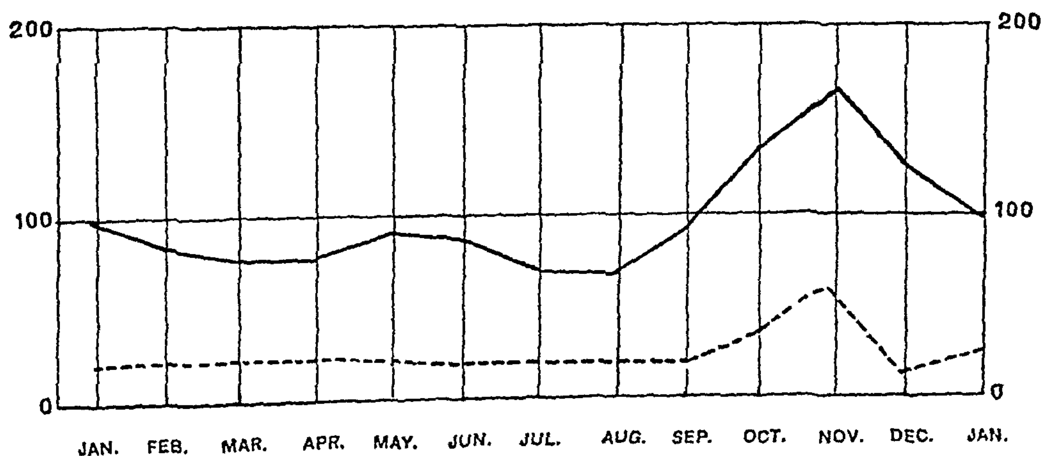
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DEATHS IN THE PUNJAB FROM FEVERS
THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE
FIRST GROUP OF 30 YEARS 1867–1896.

MEAN PERCENTAGES ————
COEFFICIENTS OF VARIATION - - - - -



SECOND GROUP OF 25 YEARS 1897–1921.

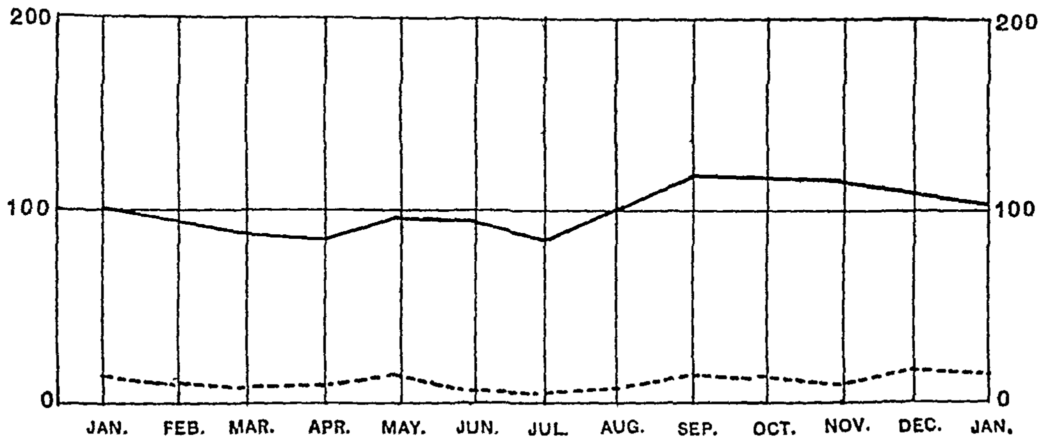


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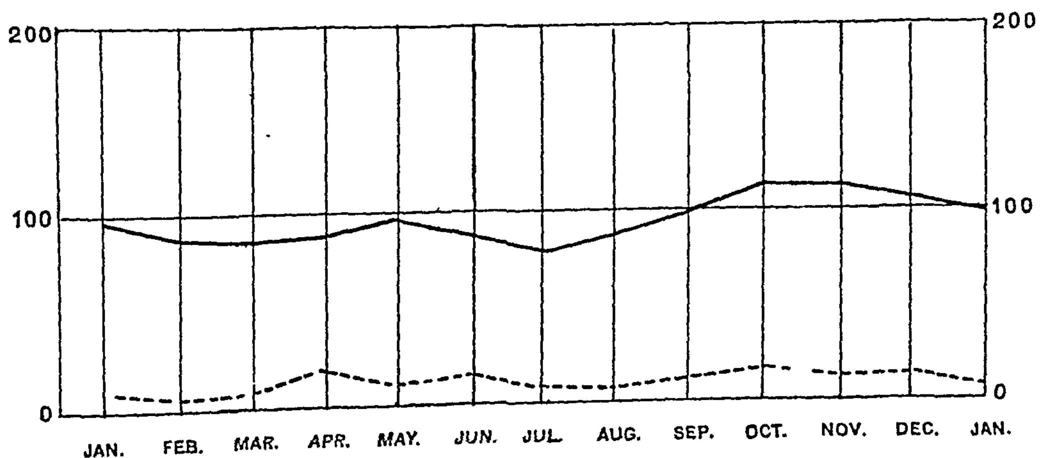
DEATHS IN THE PUNJAB FROM ALL OTHER CAUSES
THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE
FIRST GROUP OF 30 YEARS 1867–1896.

MEAN PERCENTAGES ————

COEFFICIENTS OF VARIATION – – – –



SECOND GROUP OF 25 YEARS 1897–1921.



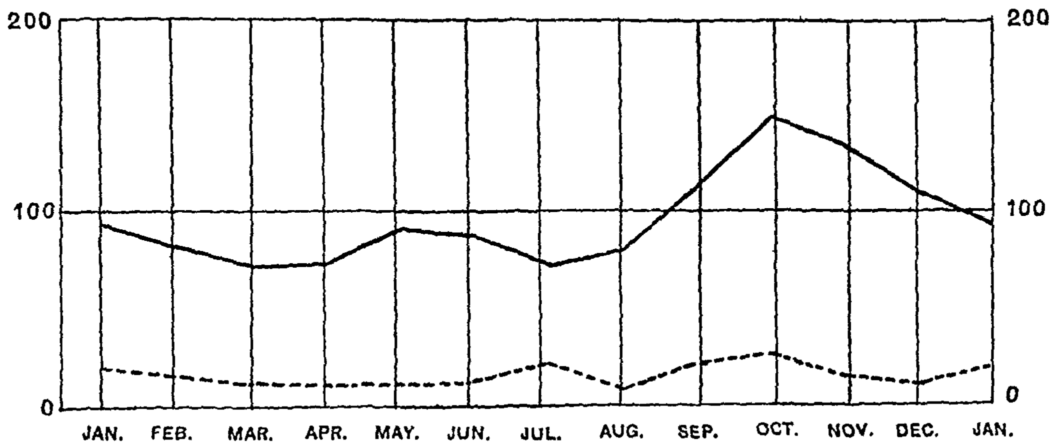
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DEATHS IN THE PUNJAB FROM ALL CAUSES THEIR SEASONAL VARIATION & STEADINESS OF RECURRENCE

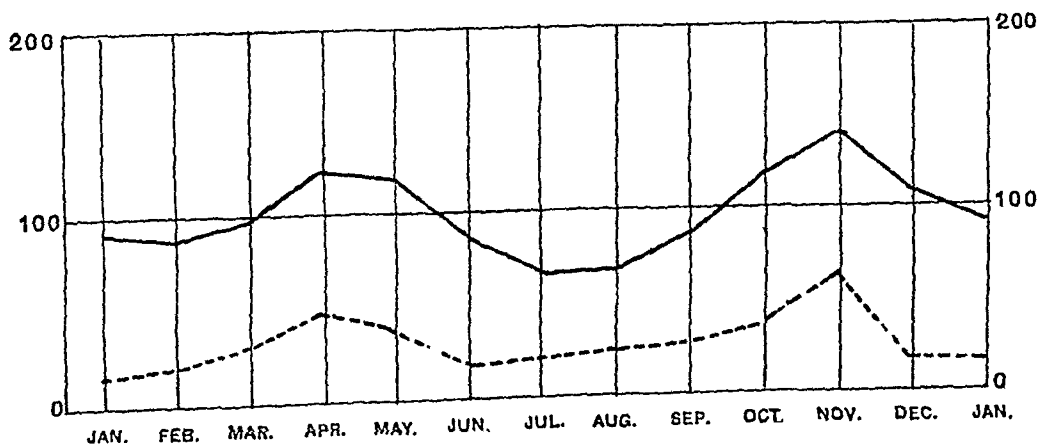
FIRST GROUP OF 30 YEARS 1867–1896.

MEAN PERCENTAGES ————

COEFFICIENTS OF VARIATION - - - - -



SECOND GROUP OF 25 YEARS 1897–1921.



No. 6343-I

APPENDIX 5.

CHANCE OF SURVIVAL FOR CHILDREN BORN IN VARIOUS YEARS OF MARRIED LIFE.

Take a single parental pair who have been married x years. Let the chance, that a child born in the pth year of marriage survive till the beginning of (p+1) th year, be R_p [Properly R_p will vary with the ordinal No. of the child, children born after the first having a better survival rate than the first-born.]

Let the chance, that a child born in the pth year of marriage lives from the beginning of the qth up to the end of the qth year of its age, be $R_{p,q}$.

Then the children born in the first year of married life alive at the end of the first year are—

$$f_1 R_{1,1}$$

The children alive at the end of the 2nd year are —

$$f_1 R_{1,1} R_{1,2} \quad \text{(aged 1 to 2)}$$
$$+ f_2 R_{2,1} \quad \text{(aged 0 to 1)}$$

The children alive at the end of the 3rd year are —

$$f_1 R_{1,1} R_{1,2} R_{1,3} \quad \text{(aged 2 to 3)}$$
$$+f_2 R_{2,1} R_{2,2} \quad \text{(aged 1 to 2)}$$
$$+f_3 R_{3,1} \quad \text{(aged 0 to 1)}$$

The children alive at the end of the xth year are —

$$f_1 R_{1,1} R_{1,2} \ldots \ldots \ldots R_{1,x} \quad \text{(aged x—1 to x)}$$
$$+f_2 R_{2,1} R_{2,2} \ldots \ldots \ldots R_{2,x-1} \quad \text{(aged x—2 to x—1)}$$
$$+f_3 R_{3,1} R_{3,2} \ldots \ldots \ldots R_{3,x-2} \quad \text{(aged x—3 to x—2)}$$
$$\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$$
$$\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$$
$$+f_x R_{x,1} \quad \text{(aged 0 to 1)} \ldots \ldots \ldots \quad (1)$$

There are in the summation $\frac{x(x+1)}{2}$ different R's. That is for a marriage of 30 years duration the number of R's will be 465. By putting all the R's equal to each other we are therefore making a pretty liberal assumption. It seems, however, necessary to do so, in order to get practical conclusions.

Put

$$R_{1,1}=R_{1,2}= \ldots \ldots \ldots \ldots R_{1,x}$$
$$=R_{2,2} \ldots \ldots \ldots \ldots R_{2,x-1}$$
$$\ldots \ldots \ldots \ldots \ldots \ldots$$
$$R_{x,1}=R$$

Then the number of children alive at the end of the xth year is (from 1 pair of parents)

$$l_x = f_1 R^x \quad \text{(aged x—1 to x)}$$
$$+ f_2 R^{x-1} \quad \text{(aged x—2 to x—1)}$$
$$+ \ldots \ldots \ldots$$
$$+ f_x R \quad \text{(aged 0 to 1)}$$

begotten by parents who have completed x years of married life.

Now we are given the number of marriages in their xth year, and the number of children alive of marriages in their xth year.

Let l_x = number of children alive from parents in their xth year of marriage.

m_x = number of parents in their xth year of marriage.

Then $l_x = m_x \times {}_1l_x$

$$\therefore \frac{l_x}{m_x} = f_1 R^x + f_2 R^{x-1} + \ldots \ldots \ldots + f_x R. \quad \text{(A)}$$

Take the values of l_x and m_x from the tables.

For the 0th recorded year of marriage x=1

" 1st recorded year of marriage x=2

and so on.

If b_x = total number of children born to parents now in their xth year of marriage.

$$b_x = m_x (f_1 + f_2 + \;\; .. \;\; .. \;\; .. \; f_x)$$

$$\frac{b_x}{m_x} = f_1 + f_2 + f_3 + \;\; .. \;\; .. \;\; .. \;\; f_x \qquad \text{(B)}$$

If we go back to the general expression (1) we have successively, by putting x= 1, 2, 3, ...

$$\frac{l_1}{m_1} = f_1 R_{1,1}$$

$$\frac{l_2}{m_2} = f_1 R_{1,1} R_{1,2} + f_2 R_{2,1}$$

$$\frac{l_3}{m_3} = f_1 R_{1,1} R_{1,2} R_{1,3} + f_2 R_{2,1} R_{2,2} + f_3 R_{3,1}$$

....

$$\frac{l_x}{m_x} = f_1 R_{1,1} R_{1,2} \ldots R_{1,x} + f_2 R_{2,1} R_{2,2} R_{2,3} \ldots R_{2,x-1} + \ldots\ldots + f_x R_{x,1}$$

This gives us x equations to solve $\frac{x(x+1)}{2}$ unknowns

$$\begin{array}{lllll} R_{1,1} & R_{1,2} & R_{1,3} \ldots\ldots & R_{1,x} \\ R_{2,1} & R_{2,2} & R_{2,3} \ldots\ldots & R_{2,x-1} \\ \ldots\ldots & & & \\ R_{x,1} & & & \end{array}$$

The 'f's' are given by equations (B).

Now it seems reasonable to assume that the survival rate of children in their *n*th year of age born in the *m*th year of marriage of their parents, is equal to the general survival rate for the *n*th year of age multiplied by a factor depending only on the duration of marriage at the time of birth.

We then have

$$R_{m,n} = K_m R_n$$

Thus we get

$$\left.\begin{array}{l} \frac{l_1}{m_1} = f_1 K_1 R_1 \\ \frac{l_2}{m_2} = f_2 K_1^2 R_1 R_2 + f_2 K_2 R_1 \\ \frac{l_3}{m_3} = f_1 K_1^3 R_1 R_2 R_3 + f_2 K_2^2 R_1 R_2 + f_3 K_3 R_1 \\ \ldots\ldots\ldots\ldots \\ \frac{l_x}{m_x} = f_1 K_1^x R_1 R_2 R_3 \ldots\ldots R_x + f_2 K_2 R_1^{x-1} R_2 R_1 \ldots R_{x,1}, \\ + \ldots\ldots\ldots\ldots \\ + f_x K_x R_1 \end{array}\right\} \text{(C)}$$

We may now put in (C) the actual survival rates for the general population R_1, R_2, ...R_x and the values of the f's determined from (B), and we have x equations to determine the x unknowns $K_1, K_2, K_3, \ldots\ldots K_x$, which give the influence of duration of marriage at birth on the survival of the children at all ages.

If we call L_x the number living at age x according to table P of the actuarial Report for the Census of 1911 (p 187) in our notation

$$R_x = \frac{L_x}{L_{x-1}}$$

So the values of $R_1, R_2 \ldots\ldots R_{10}$, should be found from this table and then substituted in equations of type (C).

To start with take all groups together. From Table P, Life Table Punjab, males page 187, Census of India Report 1911, vol. I, part I, the survival rates R are given by subtracting the percentages in col. 4 from 100 and expressing as a decimal, *i.e.*,

R_1 = ·7021
R_2 = ·9061
R_3 = ·9323
R_4 = ·9503
etc., etc.

The f's are determined from equations (B) and taking the fertility for the first ten years only, equations (C) then give 10 equations for the 10 unknowns $K_1, K_2, \ldots\ldots K_{10}$.

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